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HOFFMAN'S

FARM SEEDS ~

"GOOD SEED TO SOW"

MAR 22 1923

U.S. Department of Agriculture

~1916~

UNSTAINED HEAVY
WHITE SEED OATS

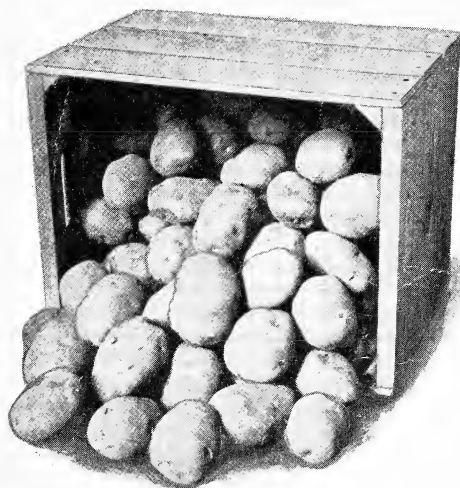
CLOVER SEED
ALFALFA

GRASSES FOR HAY and PASTURE

SOY BEANS - COW PEAS

SEED CORN

NORTHERN GROWN
SEED POTATOES



A.H.HOFFMAN, INC.

LANDISVILLE, PA.

LANCASTER COUNTY.

' HOFFMAN HOMESTEAD FARM '

To Our Customers—Past, Present, Prospective—Greetings :

It is with some pride that this 1916 Spring Catalogue is handed to you. A pride that is justified because of the valuable offerings it contains. The past excessively rainy season was disastrous to seed production over a wide territory. Yet we have succeeded in gathering an abundance of rare and standard farm seeds in qualities to suit the most discriminating seed buyers.

OUR MONEY BACK PLAN

Return of Seed Allowed and Your Money Refunded if You Want It

That is—if seed or anything we sell—is not up to your expectations you can ship it back. Four days are allowed after arrival at your station to look it over and decide. You are the Supreme Court in the matter. We won't argue. You needn't take other goods. You need not state a reason. Judge for yourself. If you prefer your money—return the goods and we'll do the same with your money and pay all freight charges. We will not be responsible in any way for seed or resultant crop after it is planted. Too many conditions we can't control are involved after seed is sown.

Extra Allowance of Time for Return of Grass Seed. Customers desiring to have grass seed tested for purity by National, State, or College Agronomist, will be allowed extra time—all that is needed—for return of seed. This extra allowance is conditional that original report of examination of seed be sent us with claim for refund.

Bags are Free and not Weighed in with Seed. This saves you the annoyance of figuring on bags when making up your order. The cost of bags is figured closely in the price of seed. Consider this in comparing our prices with others. They charge you extra for bags—we don't.

We Pay the Freight Under Certain Conditions Clearly Stated Under "Freight Offers" No. 1 and No. 2. This brings our business close to your door. You will know exactly what your seed costs you—sacked and delivered.

Freight Paid Offer No. 1

We will prepay all freight on orders amounting to 300 pounds to be shipped at one time to any freight station in Pennsylvania, West Va., Del., R. I., Virginia, Ohio, Maryland, N. Y., Mass., N. J. and Conn.

Freight Paid Offer No. 2

If you are not in our Freight Paid Territory, and order 300 pounds or more, we allow 20c per 100 pounds to help pay freight charges. Deduct this allowance from your remittance when ordering.

When Seed is to be Forwarded by Parcel Post, add for Postage as per following Schedule
From Landisville, Pennsylvania

To any Post Office in	{ Penna.—Delaware—Maryland—New Jersey — District of Columbia.....	{ 5c for the first lb. 1c for each additional lb. Limit 50 lbs.
To any Post Office in	{ New York—Va.—West Va.—Mass.—Conn.— R. I.....	{ 6c for the first lb. 2c for each additional lb. Limit 20 lbs.
To any Post Office in	{ Ohio—Mich.—Ind.—Ky.—N. C.—S. C.—Me. —N. H.—Vermont	{ 7c for the first lb. 4c for each additional lb. Limit 20 lbs.
To any Post Office in	{ Iowa Wis.—Ill.—Ark.—Mo.—Tenn.—Miss.— Ga.—Alabama—Florida.....	{ 8c for the first lb. 6c for each additional lb. Limit 20 lbs.
To any Post Office in	{ Minn.—N. Dak.—S. Dak.—Neb.—Kans.— Okla. La.	{ 9c for the first lb. 8c for each additional lb. Limit 20 lbs.
To any Post Office in	{ Mont.—Wyo.—Col.—Texas—New Mexico.....	{ 10c for the first lb. 10c for each additional lb. Limit 20 lbs.
To any Post Office in	{ Wash.—Oreg.—Idaho—Calif.—Nevada—Utah —Arizona	{ 12c per lb. Limit 20 lbs.

In calculating postage, add one pound for packing to the actual weight of seed to be mailed.

Price Changes. There are constant changes in prices of Seed Potatoes, Seed Grain, as well as grass seed. Therefore we omit seed prices from our catalogue but quote on Separate Price List. The "Price List" in effect when this catalogue is mailed to you is enclosed herewith. If you do not order soon after receipt of catalogue ask us for Latest Quotations. A new Price List will be mailed as often as you ask for it.

Payment Must Accompany Orders. Remit by Money Order, Draft, or Cash, by registered mail. Your check will be acceptable if you have money in bank.

A. H. HOFFMAN, Inc., LANDISVILLE, LANCASTER COUNTY, PENNA.



CLOVERS

The yield of Clover Seed in the United States for 1915 is 67% of a normal crop. Nothing we can say will give you a clearer idea of the Clover Seed situation. The almost continuous rains of the summer and fall in the districts of seed production is the cause. Rainy weather is unfavorable for the formation of seed. Clover grows into stalk rather than seed in rainy weather. Unfortunately, the short crop we face means much low grade seed and small stocks of high grade seed.

We realized the above conditions early in the fall. Our buyer of grass seed has the benefit of many years of experience. He understands the selections of clovers and he was put to work in time to enable him to gather large stocks of the highest grade Clovers, Alfalfa, Timothy, and other grass seeds.

If our old friends will take the trouble to arrange with us for their seed early they will benefit by the alertness of our buyer who has succeeded in selecting Clovers equal to the best grades available in years of heavy production.

A Word About Clover Grades

Have you ever noticed that nearly every local dealer of seed will claim to sell only the first grade? The careful farmer should not be deceived by such claims. In an ordinary year not more than one-fourth of the crop could be made into real first grade. More than three-fourths of all the Clover sold is under first grade. The names Fancy, Choice, Prime, and Fair are also very much abused by many local dealers and really do not mean anything.

Our Brands

In comparing our brands with others, remember that our "Safe," which is the lowest grade we offer, is free of dangerous weed seed. While not nearly equal to our "Extra" or our "North-West"—"Safe" is higher grade seed than the average stocks offered by local dealers as "1st Grade" or as the "Best." Our "Extra" or "North-West" Brands are very superior qualities. If they were not all we claim we could not make such a strong **Money Back** proposition as we do—inside front cover of this catalogue.

"Safe" Clovers easily pass the requirements for purity of any State's seed laws. "Extra" brand Clover means both a high percentage of purity and germination. Less than one-fourth of the Clovers sold can be made into qualities equal to "Extra."

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FIELD OF
NORTHWEST CLOVER

Our "NORTH-WEST" Brand

This brand is offered by us this season for the first time. Seed—either Clovers or Timothy—sold by us under the "North-West" stamp is not necessarily cleaner, sounder, or of higher germination than our "Extra" Clovers or our "Farmers Choice" Timothy now so popular through the East. "**North-West**" Seed is the highest grade gathered from that great Northwest section of our country, bordering on the Canadian line and continuous to the North Rocky Mountain regions. It has been known for years that Alfalfa Seed from this section is superior in vigor and strength to that produced further South. Only during the past few years has it been demonstrated and proven absolutely that the common Clovers, Alsike and Timothy produced in these cold border states have superior qualities of **earliness, hardiness and productiveness.**

The **extra earliness** of "North-West" Clover and Timothy Seed is undoubtedly due to the short seasons in which it matures.

The **hardiness** of "North-West" Seed comes from its survival of the severe conditions existing in the far North—extreme cold of winter—alternate freezing and thawing, both spring and fall.

Heavy yields from "North-West" grass seeds has been demonstrated and is due to the extra vigor and hardiness of the seed. The extra strength and vigor of "North-West" seed means lighter seeding and economy. One quart less per acre of "North-West" Clover or Timothy Seed is needed as compared with any other brands of seed. The saving in seed more than makes up for the extra price of the "**North-West**" brands.

There are many farmers in the old Eastern States who have trouble getting a stand of Clovers on their soils to whom we would recommend our "North-West." We believe that Clovers can be re-established by the sowing of "North-West" Seed on lands where it was formerly thought no Clovers could survive. This thought is not original with us. Farm Agents and Agricultural experts everywhere have demonstrated this fact.

It should be remembered that "North-West" Clovers and Timothy are limited in quantity. Our representative went right through the Northwest States to gather the supplies out of which we have graded our "North-West" brands. Early in the season we have full stocks but as seed time approaches we may not be able to furnish them. The real discriminating farmer will readily understand this and be quick to arrange for his requirements.

PRICES

Prices fluctuate on standard seeds like Clovers and Timothy. Therefore prices are not printed herewith. When catalogue is sent you "Latest Price List" is enclosed. These quotations are correct if you order without delay. But if you wait you should write us for "Latest Price List," which will be sent as often as you ask. This may be some trouble but you will be well repaid. Sample of seed will be furnished without cost or obligation.



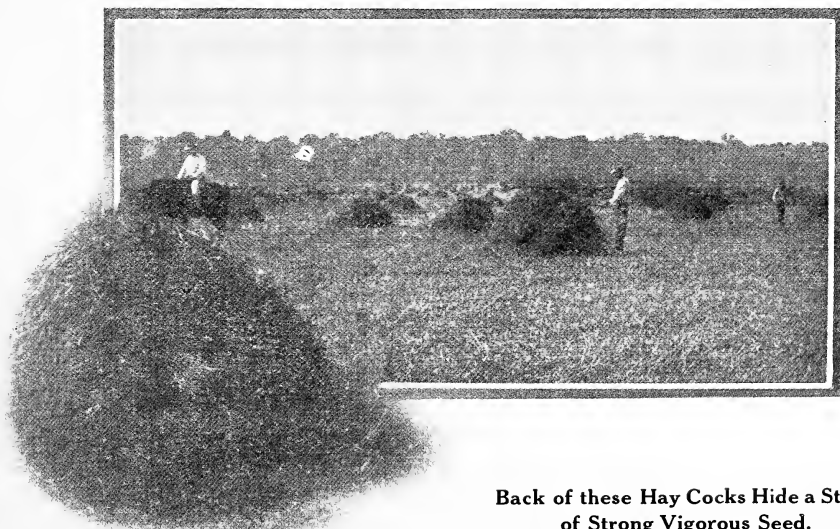
Medium Red Clover—better known as “Little Red Clover,” or “Red Clover.” This is the best known grass. Along with Timothy it forms a combination from which nine-tenths of our hay is produced. Red Clover forms an important place in every farmer's rotation. It is one of the most valuable and popular grasses. Every farmer who wants hay and pasture and at the same time wishes to conserve the fertility of his soil should sow Red Clover liberally. Where wheat is sown in the fall Red Clover should be sown the following spring with a view of getting the land into Clover after the wheat is harvested. Timothy Seed may also be sown either in the fall with the wheat or in the spring with the Clover. Upon a cold morning in early spring when the soil is honey-combed with frost is the best time to sow Clover. Three or four quarts of good Clover Seed with the same amount of Timothy is the correct quantity to sow per acre. The value of Clover crops lies not only in the pasture and hay produced but in its contribution as a legume to soil improvement. The success of this Clover is of vital importance to every farmer and he should give earnest attention to the selection of seed.

It is our business to help in this matter. We have at all times the best Clovers on hand that the market affords. The prices are not higher than the quality of seed. The careful farmer will find our service in supplying high grade Clovers sure and inexpensive. We offer Medium Red Clover Seed under the following brands—“North-West”—“Extra”—“Safe.” See Price List.

Mammoth Clover is also known as “Sapling” and “Pea Vine” Clover. It is very much like the common variety. The blossom and shape of leaves is the same and it is used for much the same purpose. Mammoth Clover is a little coarser in the stem, grows a little taller, ripens a little later, and its roots penetrate a little deeper into the soil. It produces but one crop of hay and produces less pasture after seed is produced than common Red Clover. It will thrive on poorer soil than Red Clover and withstand drouth, as well as freezing, quite well. It should be sown about the same as Red Clover. Mammoth Clover makes excellent hay—is good for green manure and is a great gatherer of nitrogen. See “Latest Price List.” True Mammoth Clover is scarce this season and sells at a premium.

Alsike Clover is much like Medium Red in manner of growth. The blossom is nearly white and the seed is very small with its color light to dark green. While Alsike is rapidly gaining favor as a valuable grass it is not yet as widely known as it should be. Alsike is not quite as tall as Red Clover but makes a finer hay. Alsike is mostly used in combination with Red Clover. The proper proportion to mix the seed is two parts Red Clover to one part Alsike, or three parts Red Clover to one part Alsike. This will make the growth about half and half of each. The Alsike seeds are much smaller than Red Clover Seed. It is economical to sow part Alsike, as a little less seed is needed. A bushel of Red Clover and Alsike Seed mixed as here recommended will reach as far as $1\frac{1}{4}$ bushels straight Red Clover. In this year of Clover Seed scarcity and consequent high prices quite a saving can be effected by substituting some Alsike for Red Clover. Alsike catches better than common Red—it is therefore some insurance against failure to sow Alsike along with Red Clover, for the Alsike will succeed when Red Clover on account of unfavorable conditions may fail—the surviving Alsike will be sufficient to make a satisfactory crop. See “Latest Price List.”

Economical Mixture of Red Clover, Timothy, Alsike. This is a combination that is a very proper one to sow for either hay, pasture or soiling purposes, and is sold so cheaply that it will appeal to all who wish to save something in grass seed bills. The proportion is approximately one-fourth Timothy, one-fourth Alsike, and one-half Medium Red Clover. The reason that this mixture can be sold cheaper than the separate grasses is as follows: **Economical Mixture** is made from lots of **Clover** and **Timothy** (Mixed) and lots of **Alsike** and **Timothy** (Mixed) that were produced and harvested in this mixed condition. The market for such seed being narrow the farmer who grows it sells it for much less than he could get if the grasses were separate. On account of the difference in size and weight of these seeds they can not be cleaned quite so perfectly as unmixed seed, but otherwise the mixture is made up of seed that in every respect is equal to that in our regular best grades and easily passes the seed law requirements of any State. Prices—See “Latest Price List.”



Back of these Hay Cocks Hide a Story
of Strong Vigorous Seed.



White Clover—well known by its small white blossoms and low, creepy growth. Very valuable in lawn grasses or other permanent mixtures. Thrives well in low, wet places, as well as high, dry situations. See "Latest Price List."

Crimson Clover is well known in the South, but it is not receiving the attention it should in the North. It should find a permanent use on every well conducted farm. Crimson Clover makes good hay, but in the North there is seldom good hay making weather when Crimson should be cut, and we advocate the growing of Crimson Clover to plow under for the purpose of adding humus and nitrogen to the soil. The strongest point in favor of Crimson Clover is that it can be grown between other crops without interference or loss. No matter how fixed is your present rotation, you can add Crimson to your plan without omitting anything else or losing other crops. You sow Crimson in your growing corn at its last cultivation in June or July, or you sow it after digging your potatoes or harvesting your grain in July, August or early September. Crimson will not grow tall during the fall but the following spring will rapidly make an immense mass twelve to eighteen inches tall and underneath a network of root formation with countless nodules of nitrogen, gathered from the air—all ready to turn under from May 1st to May 25th—in time to follow with potatoes, corn, tobacco, or nearly anything else. You add an immense amount of humus and nitrogen without missing a single money crop.

Crimson must be sown, however with some care. When you sow in a corn field you should first sow the seed, then cultivate so as to cover it. If you follow potatoes or grain crops, disc the land and harrow in the Crimson Seed. In an open field, rolling is advisable after seed is sown. Sow about one bushel to four acres. You will get a better stand and gather more nitrogen if you inoculate your seed with Farm-germ, fully described on page 32.

Prices Crimson Clover—See "Latest Price List."

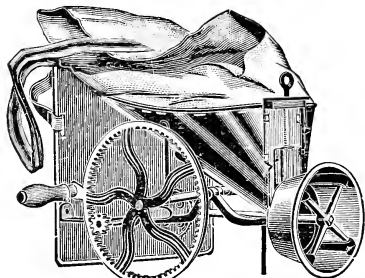
Sweet Clover (*Melilotus Alba*—White Blossom). Has come into favor and won a place in agriculture. It is a legume. Will thrive where other legumes fail as rich soil is not required. It is biennial and readily eaten by stock if turned in early in spring when they will quickly learn to eat it. It is valuable also for hay. For hay purposes it must be cut before fully ripe. Will grow from four to six feet tall. It is easily started on land that contains lime. The seed should be inoculated. See page 32. Sow April, May, June or July. Cover one-half inch and roll. Use twenty pounds hulled seed per acre, thirty pounds unhulled. There is nothing better to bring a worn out field into farmable condition at little labor than Biennial White Blossom *Melilotus*. It is worthy of any good farmer's attention for this purpose. See "Latest Price List."

Sweet Clover (*Melilotus Indica*—Yellow Blossom). This is an annual. Its value is entirely for fertilizer. Grows two feet tall and gathers nitrogen. Its value is on account of cheapness of seed. May be planted in corn fields at last cultivation. Will serve as a winter crop, but should be plowed under the following spring. See "Latest Price List."

Growing Your Own Clover Seed

If you have produced Clovers or other grass seed on your own farm you are fortunate, provided you are fixed with a Cleaner to make it **fit to sow**. If you don't have a suitable Cleaner let us sell you a "Clipper," fully described and quoted inside back cover of this catalogue.

Alfalfa—See pages 13, 14, 15, 16 and 17.



The "Cahoon" Seed Sower

"The Cahoon" Seed Sower

"The Cahoon" is accepted everywhere as the world's standard sower. It is the most accurate and the most durable. It is made of steel, iron and brass and will last as long as any farmer and still be as serviceable as when new. Full directions go with every machine. Adjustments are easily made, and it is a pleasure to operate. We send them to our customers packed up in corrugated fibre boxes by parcel post, postage prepaid for \$3.50 each.

National Seeder is accurate, light in weight and inexpensive. Not as durable as the "Cahoon," but if oiled carefully will do good work a long time. Price \$1.00, postage prepaid.



Crimson Clover



TIMOTHY SEED.

Timothy shares with Red Clover great popularity. It is so universally used that it needs no recommendation. Timothy is very easily established. The seed is inexpensive and easily sown. It is very hardy, easily enduring extremes of either heat or cold. When intended for pasture Timothy should be sown along with Clover. These two grasses do well together. Timothy does not make a sod by itself but with Clover will produce a growth that can be pastured with safety to both grasses. When sown alone about eight quarts of Timothy are required per acre. If sown with Clover, only about four or five quarts are needed per acre.

Good seed is an essential of success in farming Timothy. Poor seed besides being full of weeds will not grow. Seed of poor germination may come up weakly and live, but produces few stalks of uncertain growth. The difference in cost of inferior Timothy and the better grades is so little that it is poor economy to buy the cheaper stuff always offered.

Our Timothy Grades

"Farmers' Choice" is clean and of highest germination. It is made out of the cleanest and soundest seed that can be found in the market. We have been selling "Farmers' Choice" for years to the satisfaction of our growing trade. Less than one-fourth of the Timothy grown in America can be cleaned into "Farmers' Choice" quality.

Our **"Safe"** is a little below "Farmers' Choice." It is as its name indicates, Safe to Sow, being free of objectionable weed seeds and germination high. Will comply easily with any state's seed laws.

"North-West" Timothy is not necessarily cleaner or of higher germination than "Farmers' Choice," but it is the best selection from the states from which our "North-West" Clover is produced. "North-West" Timothy is a little earlier, a bit hardier, and it is believed will grow a little taller and ranker than seed from the states of the great Middle West. Supplies of "North-West" Timothy are limited and if you order this brand after our stocks are disposed of we will substitute "Farmers' Choice" and refund difference in price.

Prices of Timothy vary all through the season, so we cannot print them into our catalogue. We handle immense quantities and are always willing to give you benefit of close quotations based on market conditions.

In comparing our prices of grass seeds do not overlook our Bags Free and Freight Paid Offers.





MISCELLANEOUS GRASS SEEDS

Permanent Hay and Pasture Mixtures. The right grasses—from 12 to 16 in number—in the right proportions are used to make up these mixtures. The highest authorities have been consulted and our practical experience followed. Varieties are used that will make a succession of grasses to be cut or pastured the first season. If the seed is sown carefully, under reasonably good conditions, pasturing may begin early in the summer and last until late fall. If the sowing is for hay several cuttings may be made during the first season. A large proportion of the grasses used are of a permanent nature and a field once firmly established will last for many years. These mixtures are recommended for either spring or fall sowing, 30 to 35 lbs. per acre. Two mixtures are made—one for well drained upland sowing, which is called Highland Mixture—the other for lowland meadows, which is called Lowland Mixture.

There are farms in every community that have land—now left idle because of difficulty in farming—too rocky, too steep, too small or too wet to be farmed in the regular rotation; that if sown to one of our mixtures could be made to produce hay or pasture in profitable quantity for many years. Now that hay has become so high in value it is wasteful not to put these areas of land to work producing either hay or pasture. Prices—See "Latest Price List."

Red Top. This is a valuable grass for either hay or pasture. May be sown either spring or fall. Grows slowly in the spring and ripens with timothy. It is a strong grass. Does not die out. When once well started will spread and supplant other grasses. It, however, is not hard to destroy when it is necessary to plow land for other crops. It succeeds well in any soil and is particularly well adapted for low moist lands. Red Top Seed is sold both solid and in the chaff. Sow 8 to 10 lbs. per acre of solid seed or 20 to 30 lbs. in the chaff. The heavy seed weighs 30 lbs. per bu. The light seed weighs 14 lbs. per bu.

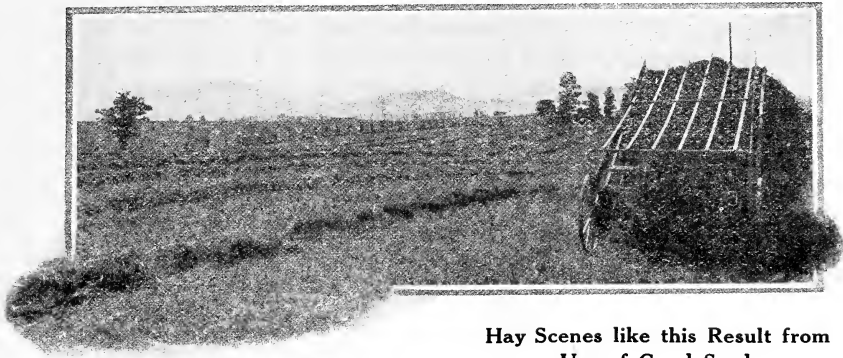
For several years Solid Red Top Seed has been scarce and high. Last year a bright, heavy crop of seed was produced and prices are not more than half as high as a year ago. Under these circumstances we recommend seeding heavy seed rather than resorting to the lighter unhulled. We have farmers who prefer Red Top to Timothy as a producer of either hay or pasture. It is a very valuable grass both for seeding alone or to seed along with Timothy, Clover, or other grasses. With low priced good seed available—this is the year to give it trial. See Price List.

Kentucky Blue Grass. This fine-bladed, rich green, nourishing grass may be sown in the spring or fall. It grows most rapidly in cool weather but withstands the effects of the greatest heat. Kentucky Blue Grass does not grow as rapidly as some other grasses but when once started makes the finest pasture. It is one of the best grasses for lawn mixtures and for other hay and pasture mixtures. On limestone soils the finest lawns can be started with Kentucky Blue Grass alone; however, we prefer our Lawn Grass Mixture for lawn purposes and for hay or pasture purposes we advocate that other quicker growing grasses be sown with it. We have beautiful, heavy Kentucky Blue Grass to fill our orders this spring and the price is low, which should induce its more liberal use. See Price List.

Orchard Grass. This is one of the best grasses. It is valuable both for hay and pasture. It is very succulent and nourishing and is more leafy and of greater length than most other grasses. Orchard Grass grows quickly and bears close cutting and close pasturing. It begins its growth early in the spring and continues right up till late fall. It will last for years without the necessity of re-sowing. May be sown either in the spring or fall on any kind of soil that is not actually covered with water. Two bushels are required to sow an acre. Prices—See "Latest Price List."



Hay Grown from Our Permanent Hay and Pasture Mixture



Hay Scenes like this Result from
Use of Good Seed

Canada Blue Grass. Very much like the Kentucky except that it is coarser, grows a little more rapidly—good for hay and pasture but not so desirable for lawns. Price—See “Latest Price List.”

Hoffman’s Lawn Grass can be seeded with absolute assurance that you are seeding the best. It is composed of strictly clean, fine leaved grasses of highest quality. The most expensive grasses are included, and the mixture, if carefully seeded on well prepared soil, will produce a most beautiful sward—even—fine in texture—rich green in color. Lawns may be seeded at any time from spring to fall. Weather, however, is apt to be most favorable to seeding very early in the spring or early in the fall. One pound of seed will reach for two hundred square feet if soil is thoroughly pulverized and in mellow condition. When soil conditions are not strictly ideal, heavier seeding is advised. We advise that seed be raked in lightly so that it will be covered from one-fourth to one-half inch. After seeding, the soil should be pressed down firmly. Prices—20c per pound. See Parcels Post rate. \$3.00 per bu. of 20 lbs.

Meadow Fescue. Another perennial of much value. Sometimes called English Blue Grass, but it is not at all like our Kentucky or Canada Blue Grass. Meadow Fescue grows two feet tall—thrives anywhere in the North. Yields abundantly of either hay or pasture. Suitable for mixtures. Is relished by stock. Does well on wet soils. Keeps growing well into winter. Sow either spring or fall, fifty pounds per acre if sown alone. See Price List.

English Rye Grass. Also sold under the the more general name of Perennial Rye Grass. Is an extremely valuable grass that makes a rapid growth. Adapted to all soils. May be sown either spring or fall. Is a good one for mixtures. Does well with Orchard Grass. When sown alone 30 to 40 lbs. per acre is required. Prices—See “Latest Price List.”

Bromus Inermis. This grass came originally from Russia. It is now grown largely in the West, where it has become one of the most popular grasses. It is a perennial grass that will stand for years on the same ground without renewing. It wants a rich soil for best results. May be sown from early spring to late fall. It withstands heat, drought and frost. It is alike valuable for pasture and hay. Both hay and pasture is greatly relished by cattle and all kinds of stock. It roots so deeply that it is enabled to thrive on the driest soils. It is a good one to sow with other grasses. Bromus Inermis is entitled by its many merits to more general use in the East. Sow two to three bus. per acre. It weighs 14 lbs. per bu. Prices—See “Latest Price List.”

Tall Meadow Oats Grass. Here is a tall rank grass that may be grown on soils that are inferior. It grows quickly and makes a good hay or pasture. It is hardy and will last for years without resowing. It is so deeply rooted that it will withstand drought of any length. This grass becomes green very early in the spring and remains green late in the fall. This grass should be more generally known for it is certainly a valuable variety and worthy of the attention of the best farmers. It weighs from 11 to 14 lbs. per bu. Sow from 2 to 3 bu. per acre. This is a valuable grass in mixtures. It is especially adapted to be sown with Orchard Grass, Red Top and similar grasses. It is more expensive than the rye grasses but really one of the most valuable on our list. Prices—See “Latest Price List.”

MILLETS

Millets are grown largely in the West, but do not have a place in Eastern agriculture except occasionally when drouth cuts short usual supplies of hay and forages. Millets may be sown in June, or even in July, and same will rapidly grow into heavy crops.

Hungarian Millet is the most widely known and is a reliable sort. Sow three pecks per acre for hay and only a half bushel or less for seed production.

German Millet is a little finer in texture of stems than Hungarian and is popular. Sow three pecks for hay. Only one peck to grow seed.

Japanese Millet grows taller and finer than either Hungarian or German. It will grow on the poorest soils and no location is too far North for it to thrive. Some seedsmen in the West sell Japanese Millet as “Million Dollar Grass.” It is a wonderful grass on account of its rapid and tall growth and has its uses. Sow one-half bushel Japanese Millet per acre. See “Latest Price List.”



Grains of Shadeland Climax Seed Oats

SEED OATS

During the past dozen years we have sold to thousands of farmers in Pennsylvania and adjoining states—seed oats of the greatest value. The “Tartar” Oats and the “Bumper Crop” which we distributed almost exclusively have created for us much good will and produced for our customers profitable crops. We had planned to push the sale of these two varieties this season until most of the crops farmed for us were doomed in the fields where grown by many weeks of rain.

With the exception of one lot of “Bumper Crop,” (which is stained but not injured for seed purposes) the tens of thousands of bushels of Seed Oats grown for our trade had to be abandoned on account of the general condition of havoc caused by rains in every oats growing section East of the Mississippi.

The above is not offered as an excuse for lack of service on our part. Our customers depend upon us for seed no matter how difficult it is to procure it. We will not fail them. In fact, the ruin to Seed Oats all over the Eastern, as well as most of the Central States has caused us to find two new varieties that we believe will be the greatest in value of all the varieties we have ever catalogued.

Shadeland Climax Oats

At the great Panama Exposition at San Francisco last year there were displayed scores of different kinds of oats of the finest qualities both in the grain and in the sheaf. One of these attracted much more attention than all the others. It was the “Shadeland Climax.” It was the pleasure of the writer to admire this variety at the Exposition—first in the great Oregon Agricultural display, then as part of the other displays from states of the far West.

Upon investigation through agricultural experts of the far West we learned that “Shadeland Climax” Oats was more than a beautiful oats in the berry and straw as shown by the exhibitors. We found upon investigation that “Shadeland Climax,” besides being a thing of beauty, was a variety of great productiveness—yielding more fine heavy oats per acre, even on thin soils, than any other variety grown on the Pacific Coast. Pursuing further our study, we found that “Shadeland Climax” Oats has proven its adaptability for successful culture in other climates and soils than those of Oregon, in which it has been so successfully propagated. “Shadeland Climax” has been taken to the states of the Mississippi Valley and planted in different locations from the Canadian line to Southern Missouri. In these places “Shadeland Climax” Oats have made enormous yields—withstanding the vicissitudes of climate and soils, and proved itself one of the greatest varieties of oats.

“Shadeland Climax” Oats was developed in the famous Shadeland Valley of the state of Oregon, extending for a hundred miles South of Portland. This valley is not flat, nor is it irrigated. The land is gently rolling to hilly. Oats here grow to perfection and the Shadeland Valley has long had a reputation for producing Seed Oats that is always white, heavy, strong in germination and vitality, and when taken to other sections carries with it the power to produce extra heavy yields. “Shadeland Climax” is superseding other varieties



and immense quantities of this variety are grown for Western Seedsmen—but not as many as Western Seedsmen require. We had the help of the highest agricultural officials of Oregon to direct us to the growers of “Shadeland Climax” early last fall. It was with the greatest difficulty and only with the active influence of San Francisco Fair officials that we finally secured several cars of these wonderful “Shadeland Climax” Oats to bring to our warehouse at Landisville, from which point we will distribute them while they last—to our customers at prices that are high as compared with values of common oats—but low when considered in connection with their original cost to us, their great value, prominence, popularity—not to speak of the cost for freighting them across the United States.

“Shadeland Climax” is a sprangled or tree oats, large in the berry, often showing three grains to a spikelet. The hull is thin and the hulled oat berry is one of the largest and finest you ever saw.

No oats is absolutely rust proof but “Shadeland Climax” has real resistant qualities that makes it safe from ordinary attacks when other varieties yield to rust’s ravages.

“Shadeland Climax” is early—very early—ripening ahead of other sorts. “Shadeland Climax” has a stiff straw that stands up under its burden of grain under the most trying circumstances.

Lastly and most important, “Shadeland Climax” is one of the heaviest yielding tree oats. On tracts of hundreds of acres it has given yields of ninety-three (93) bushels per acre. On smaller tracts more than one hundred (100) bushels per acre have been harvested. In the best tests possible—along side of other sorts—it has come out first—first in yield—first in earliness—first in rust resistant qualities—first in ability to stand up against storm—first in weight of grain, in thinness of hull, and the most beautiful white oats you have ever seen.

Price—Shadeland Climax—\$1.50 per bu. regardless of quantity purchased. Not less than 1 bu. sold. Bags Free. Freight Paid Offers apply. Don't delay ordering this greatest of sprangle oats.



Sheaves of Shadeland Climax Oats as Shown at San Francisco Exposition

Improved White Russian Oats

("SIDE" OATS)

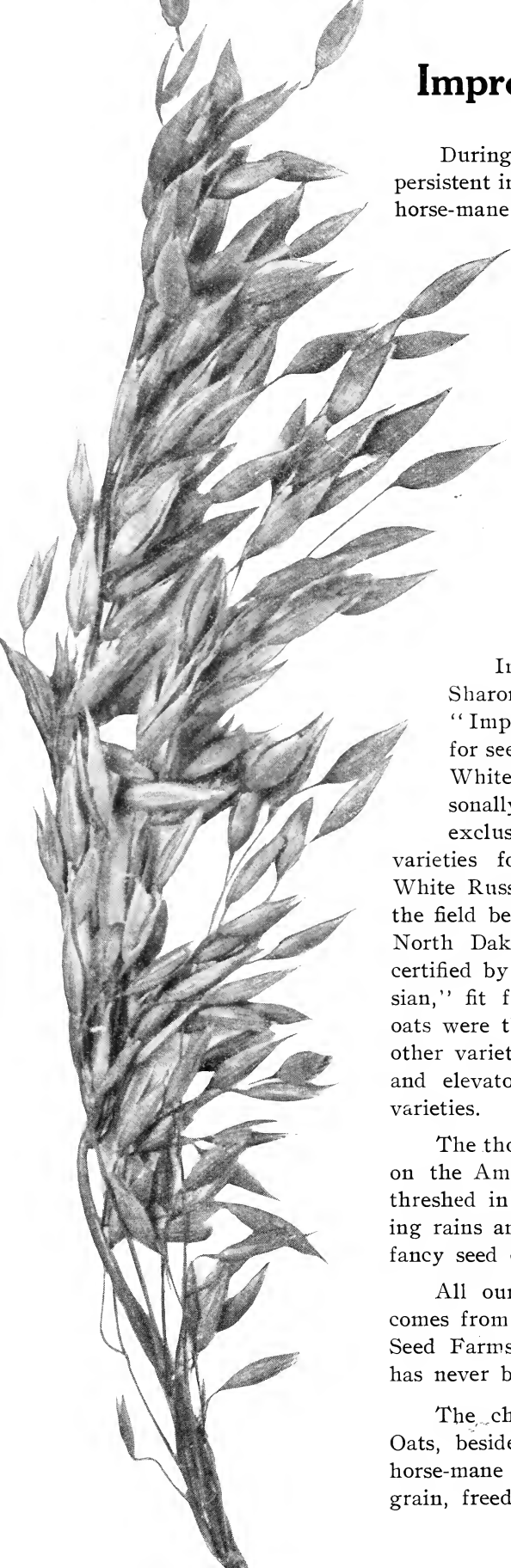
During the past few years we have had continuous and persistent inquiries for a side oats, or as some have stated a horse-mane oats. Side oats have many friends in Pennsylvania, New Jersey and other adjoining states. We admit never being able to furnish them in sufficient quantities. This season we determined to prepare ourselves to meet the popular call for a side oats. Through our connections with Agricultural Colleges and State Experiment Stations we were advised that the "Improved White Russian" was a side oats that was true to type and capable of producing heavy crops. This variety has been grown extensively in the Northwest—the Dakotas, Montana, Northern Minnesota, and Wisconsin. It has been taken further South and its introduction everywhere has been attended with success.

In North Dakota, on the famous Amenias and Sharon Seed Farm of 40,000 acres, we found the "Improved White Russian" being grown especially for seed purposes with the greatest care. "Improved White Russian," on this famous farm, which we personally visited to select our stocks, has been grown exclusively; therefore, entirely apart from other varieties for the past seven seasons. The "Improved White Russian" Oats on these farms were examined on the field before harvest by the Agricultural Authorities of North Dakota and our stocks were selected from fields certified by them to be genuine "Improved White Russian," fit for seed and unmixed with tree oats. These oats were threshed by a machine that has not threshed other varieties of oats. They were handled in cleaners and elevators that have never carried or milled other varieties.

The thousands of acres of "Improved White Russian" on the Amenias and Sharon Farms were harvested and threshed in an absolutely sound condition without damaging rains and are strictly beautiful, white, unstained and fancy seed oats.

All our stock of "Improved White Russian" Oats comes from the certified fields of the Amenias and Sharon Seed Farms and a better, sounder, truer lot of side oats has never been offered.

The characteristics of "Improved White Russian" Oats, besides the growing of the grain on one side in horse-mane fashion, are earliness, plumpness, weight of grain, freedom from disease, very thin hull.





Cutting White Russian Oats

Grains of "Improved White Russian" are very plump—not very large understand—but very plump. The hulled kernel is as large as the largest grained oats but the hull that encompasses it is so thin that the unhulled grain is not much larger than the hulled kernel. It is heavy. Our tests of weight show 44 pounds per measured bushel—unclipped, please, but carefully milled.

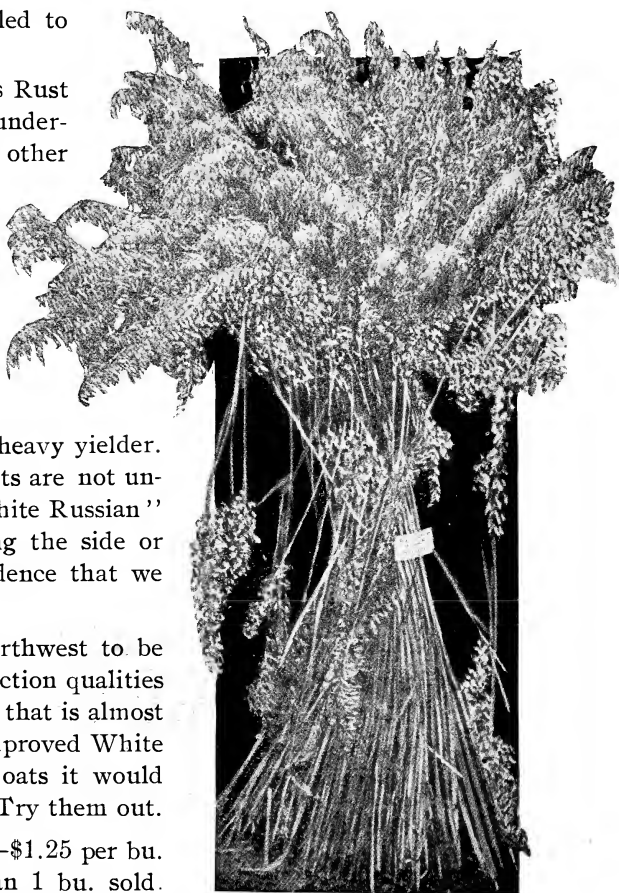
It is early—not the earliest—but entitled to be called a real early variety.

"Improved White Russian" Oats has Rust Resistant qualities. It is not rust proof, understand, but has suffered little damage when other sorts were nearly destroyed. The straw, too, is stiff. On the level land of North Dakota where storms have full sway, "Improved White Russian" stands up well as compared with other sorts.

The practical test of any grain's value depends most of all upon its yielding possibilities. "Improved White Russian" stands right in the front as a heavy yielder. Crops of 100 bushels per acre on large tracts are not uncommon. We believe that "Improved White Russian" is entitled to first place as a yielder among the side or horse-mane varieties and it is with confidence that we recommend it to our customers.

Seed Oats brought from the cold Northwest to be planted further South brings from that section qualities of hardiness, productiveness and earliness that is almost an insurance against failure. Even if Improved White Russian were only a common variety of oats it would pay to plant it in the East and South. Try them out.

Prices—Improved White Russian Oats—\$1.25 per bu. No reduction for quantity. Not less than 1 bu. sold. Bags free. Freight paid offers apply. Greatest side oats.



Improved White Russian Oats



Regenerated Swedish Select Oats

This valuable variety was brought to this country from Russia, by the Department of Agriculture, in 1899. It at once became popular because of its heavy yields and other desirable characteristics. It is early, has a stiff straw that prevents lodging, and is a branching variety. A few years after its introduction to this country, Mr. G. A. Garton took it to England, and there under his care and breeding so improved it that when it was again sown in this country it showed greater yields than when first brought from Russia.

The Bureau of Plant Industry of the Department of Agriculture at Washington, in an official bulletin says of this variety: "It has been shown that the ten year average yield of this oats at the Wisconsin Experiment Station was eight and one-half bushels per acre greater than the average of all other varieties."

While we believe that the special varieties we offer this season will sometime supplant all the old standard sorts, "Regenerated Swedish Select" has great merit as a standard sort. It has a great root development that helps it in hard soils and carries it through seasons of drought.

The "Regenerated Swedish Select" we attempted to grow here in the East made full crops of heavy oats but were badly discolored and of doubtful germination, therefore were barred from our seed stocks. Our buyer, however, found in Northern Minnesota in the Red River Valley "Regenerated Swedish Select" that is pure, weighs 46 pounds per measured bushel, unstained, seed of high germination. It is now in our warehouse, ready to fill orders. Sow three bushels per acre by weight. See Price List.

Silver Mine Oats

This is a standard sort that yields big crops of heavy oats. The manufacturers of rolled oats desire "Silver Mine" on account of large white kernels. The heads of "Silver Mine" are sprangle and long—borne low down on the stalk which seems to prevent lodging. Our "Silver Mine" is absolutely white and unstained. It was selected by us in Idaho where it grows to perfection on non-irrigated soils. Oats from the "Silver Mine" section of Idaho has great vitality and when taken to other sections to sow carries with it a degree of vigor and hardiness that will show in the crops grown from it. Sow three bushels per acre by weight. Our "Silver Mine" weighs 47 pounds per measured bushel. See Price List.

Bumper Crop

"Bumper Crop" Oats has justified every claim we ever made for it. We like "Bumper Crop" because of the friends it has made for us. Our customers like it for the money it has made for them. The only complaints we have about "Bumper Crop" is from growers who are annoyed by the insistent demand from their neighbors for seed. "Bumper Crop" was all bred from a single head of oats selected by Mr. E. C. Detmer of Ohio, from a field that was lodged flat. This single head stood up alone like a sentinel. It had thick walled straw. The head was of great size, with grains all around it twice the size of common oats. This head contained the parents of our present "Bumper Crop" Oats. The variety is one of great productiveness, outyielding all common sorts. It is early—stiff in the straw—has decided smut and rust resistant qualities.

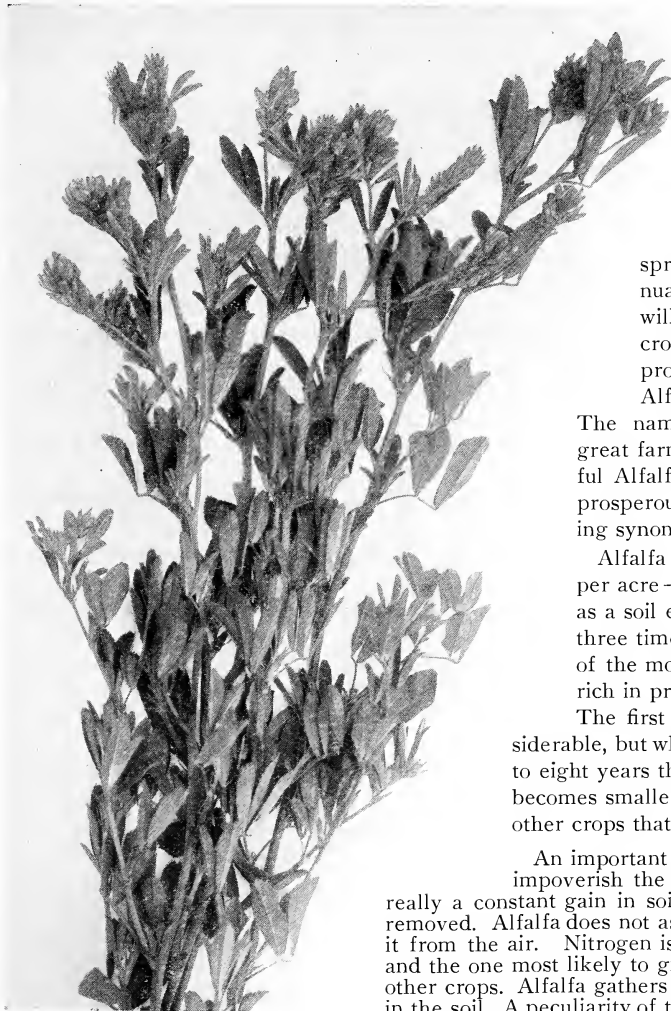
This season when so much oats grown in the East is unfit for seed on account of the continuous rains during last oats harvest, we learn that "Bumper Crop" was not as badly damaged as the others. It is stained somewhat but otherwise our "Bumper Crop" is sound and of highest germination—even though common varieties grown side by side and harvested under like conditions are ruined. See Price List.



Field of Regenerated Swedish Select Oats



ALFALFA



The popularity of Alfalfa continues. Its success has been clearly established. It is the most wonderful crop now in cultivation. Alfalfa growing can't be overdone. Prices of Alfalfa hay, Alfalfa meal, Alfalfa lands, have not declined with the

spread of Alfalfa culture. In time the annual product of Alfalfa hay in this country will rival in value our wheat, corn and oats crops. Nearly every farm will eventually produce some Alfalfa. Even now a field of Alfalfa on a farm enhances the farm's value.

The name Alfalfa Farm at once conveys ideas of great farm values. When you point out a successful Alfalfa farmer you are invariably showing a prosperous man. The very name Alfalfa is becoming synonymous with wealth and prosperity.

Alfalfa excels every other forage crop—in yield per acre—in feeding value—as a drouth resister—as a soil enricher. Here in the East it may be cut three times a year. It will yield three to six tons of the most valuable hay each season. Alfalfa is rich in protein and equal in feeding value to bran.

The first cost of starting an Alfalfa field is considerable, but when this cost is divided up between the five to eight years that the field will last without reseeding it becomes smaller for each year's crop than it cost to grow other crops that must be seeded annually or biennially.

An important characteristic of Alfalfa is that it does not impoverish the land upon which it is grown. There is really a constant gain in soil fertility while crop after crop is being removed. Alfalfa does not ask the farmer for nitrogen because it gets it from the air. Nitrogen is the most important element in the soil and the one most likely to give out under the strain of growing most other crops. Alfalfa gathers all it needs and deposits great quantities in the soil. A peculiarity of the Alfalfa plant is its long tap root, which has been known to reach many feet into the subsoil. Unlike most

other farm crops, Alfalfa makes nearly all of its growth below ground the first season. The deep penetrating roots bring up from the subsoils phosphorus and potash and store it near the top soil for use of succeeding crops.

How to Grow Alfalfa—Next Page.

FACTS ABOUT ALFALFA

The U. S. Dept. of Agriculture says: "In addition to the hay crop, Alfalfa at two years adds \$100 to the value of every acre on which it grows."

"There is no state in the Union in which Alfalfa cannot be successfully grown."

Alfalfa produces from 3 to 7 tons hay to the acre.

It has as much protein as Wheat bran.

360 stalks have been grown from one seed.

It does not exhaust the soil, it enriches the soil.

It will grow 3 to 5 crops a year.

Alfalfa in money value is worth 45 per cent. more than other Clovers and 60 per cent. more than Timothy.

Ten milch cows can be fed on less than 2 acres by soiling.

One acre will pasture 20 pigs for 6 months.

Three pounds a day makes a full feed for fattening lambs.

Four to Five pounds makes full feed for fattening aged sheep.

Thirty-five pounds makes full feed for fattening steers.

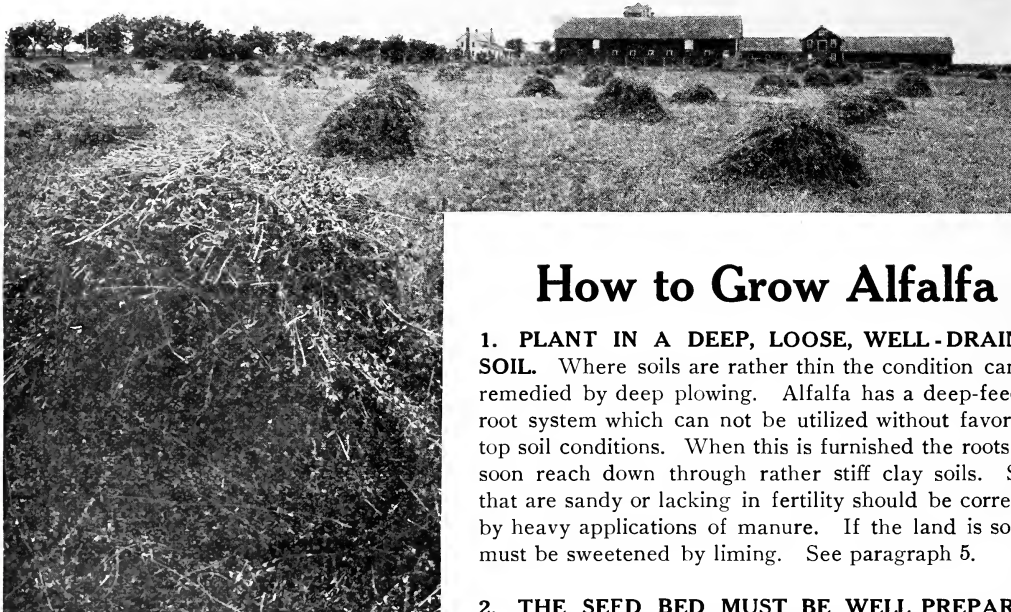
Sheep fed on Alfalfa will gain from 8 to 15 pounds in 75 days and will double with small grain ration added.

Lambs wintered on Alfalfa will produce one to two pounds more of wool than when on the ranch.

Fed to dairy cows Alfalfa maintains the flow of milk equal to June Grass. It can be chopped fine with corn meal. Such a mixture is worth more a pound than the original corn meal.

Many interesting facts in addition to the above might be cited about Alfalfa. It would hardly be possible to say too much about Alfalfa, it is a working plant which is changing the destiny of many farming sections.

"Its long branching roots penetrate far down, push and crowd the earth this way and that, and thus constitute a gigantic subsoiler. These become an immense magazine of fertility. As soon as cut, they begin to decay and liberate the vast reservoir of fertilizing matter below the plow, to be drawn upon by other crops for years to come."



Alfalfa from "North-West" Seed

How to Grow Alfalfa

1. PLANT IN A DEEP, LOOSE, WELL - DRAINED SOIL. Where soils are rather thin the condition can be remedied by deep plowing. Alfalfa has a deep-feeding root system which can not be utilized without favorable top soil conditions. When this is furnished the roots will soon reach down through rather stiff clay soils. Soils that are sandy or lacking in fertility should be corrected by heavy applications of manure. If the land is sour it must be sweetened by liming. See paragraph 5.

2. THE SEED BED MUST BE WELL PREPARED. The soil should be thoroughly pulverized to considerable depth and then made quite firm by rolling or dragging. The land must have a chance to settle. It usually takes

as much as six weeks for land to settle, though in periods of frequent heavy rains the settling process may require only four weeks. The disc and harrow are the tools needed to follow the plow in soil preparation. After the ground is thoroughly prepared it should be harrowed after each rain. If it does not rain the land should be harrowed every ten days until the seed is sown; this will insure sufficient moisture for germination and destroy the weed seeds in the soil. Unless the land is thoroughly freed of weeds ahead of seeding there is danger of same making headway and choking out the Alfalfa plants while they are young and tender. When you plan Alfalfa seeding long in advance you should grow cultivated crops ahead of the Alfalfa and make every effort to destroy every possible weed plant before it reseeds itself.

3. IF SOIL LACKS HUMUS it is well to supply it by turning under clover sod or cow peas or soy beans or crimson clover or sweet clover. This will make the soil friable and with the manure you apply will give the Alfalfa the fertility of soil to sustain it in its early growth. Alfalfa when established is a strong grower and will look out for its own feed if there is anything in reach. But when the plant first starts it is indeed weak and must have plenty of available food in order to make a good growth the first year. Then it will build a strong tap root which will enable it to winter well and start vigorously to produce growth of hay the following spring.

4. INOCULATION IS NECESSARY. This means that you must plant in the soil, nitrogen-fixing germs or bacteria, without which Alfalfa cannot flourish. Where sweet clover grows vigorously by your roadside it is possible your land has naturally the proper bacteria to grow Alfalfa as these two bacterias seem to be the same and where one grows the other will thrive. Your soil may be full of clover bacteria or cow pea or soy bean bacteria but these germs will not help your Alfalfa. So that it will be necessary to supply these Alfalfa germs or bacteria artificially. We believe the very best bacteria to buy is that sold under the trade name of "Farmogerm." We keep it in stock at all times and furnish it to our customers. See our "Farmogerm" advertisement on page 32 of this catalogue. The manufacturers of "Farmogerm" were the original discoverers and introducers of commercial bacteria and we believe that their product is the most dependable that can be secured. Their laboratory processes are most elaborate and scientific and we do not believe that the bacteria now being sold by others at lower prices can be relied upon. We absolutely know after putting out Thousands of Dollars worth of "Farmogerm" that this form of cultures is all that is claimed for it. There are other methods of inoculating Alfalfa but we cannot recommend them.



5. USE OF LIME FOR SOIL ACIDITY. Alfalfa must have soil that is sweet and not acid. Where crops of grain have been grown successively for many years soils are apt to become acid. You can test your soil yourself, as follows: Buy a nickel's worth of blue litmus paper at your drug store. Take a knife and cut into the ground you want to test, pressing the earth slightly apart. Then push a piece of the blue litmus paper into the opening and press the earth firmly together so that the blue litmus paper will be held firmly and leave it there for several hours. The soil must not be too dry. If the paper turns from blue to red it is evident that your soil is acid and needs lime to correct it. To insure correct results the test should be repeated in several parts of the field. Burned lime should not be used in greater quantities than two tons per acre. If ground limestone is used an application of 3,000 pounds per acre is recommended. Where agricultural lime is procurable it is safer to use than either of the above forms as it is not caustic. Two tons of lime or more, not caustic, per acre may be used. All lime must be applied after plowing and same must be worked in thoroughly, preferably by discing and if possible a few weeks before seeding.

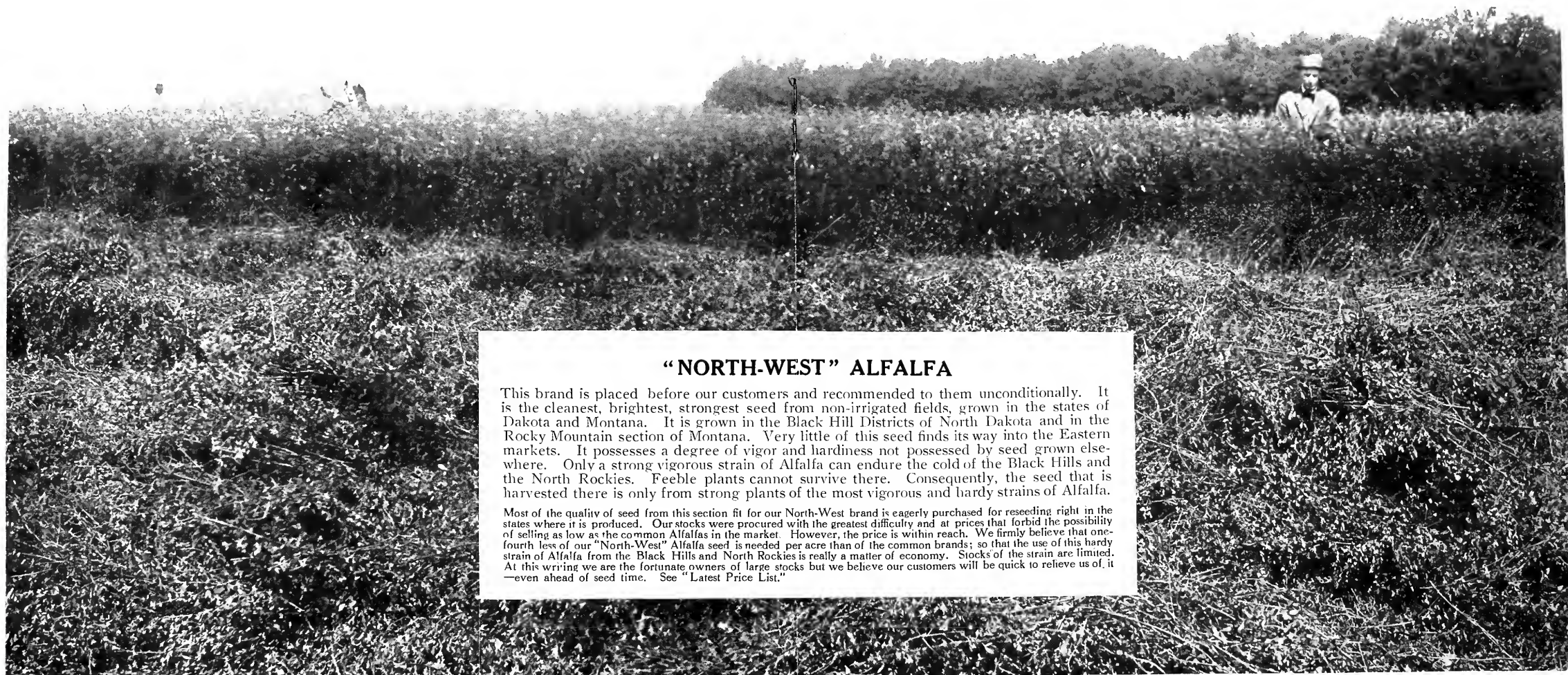
6. BEST TIME TO SEED. This is different in different localities and depends upon climatic conditions and upon whether you can give proper attention to soil preparation, weed killing, etc., in advance of any set time for seeding. You can sow either spring or fall here in the Middle Atlantic and Ohio Valley States. A very good rule is to seed **as long ahead of the most trying season** for the young plants as possible. Anytime in late April, May, or June in the spring, or late July, August, or early September in the fall is permissible, provided the other conditions in these paragraphs have been taken care of. Where very hot mid-summers must be feared, early fall seeding should be considered. Where very severe winters are anticipated spring seeding may be preferred. We have observed that among the successful Alfalfa growers of Pennsylvania and adjoining states spring and fall seeding are practised in about equal proportion and with about equal success.

7. SHALL THE SEED BE COVERED? By all means cover the seed. Seeding on top as clovers and timothy are occasionally seeded will be risking failure. On heavy loam soils cover the seed from three-fourths to one inch. On sandy soils that dry out readily cover one and one-half to two inches. Alfalfa seeds have a hard coat and will not germinate unless the seed is firmly packed in damp soil. When seed is broadcasted a shallow set smoothing harrow or a weeder must be used. We believe in rolling after working in the seed. Alfalfa disc drills do splendid work as the seed can all be placed in the exact depth that is required.

8. HOW HEAVY TO SEED. In the East more seed is needed than in the West. We advise using plenty of seed. Ten to twelve pounds would be sufficient here in the East if all other conditions were exactly as they should be. Unless you have eliminated all danger from weeds and are absolutely sure of sufficient dampness to encourage perfect germination and can place every seed at the right depth you will be much safer if you sow twenty pounds per acre. We know many successful Alfalfa men who put in thirty pounds per acre. This is a matter of judgment which must be considered together with every other condition under which the Alfalfa bed is started.

9. ABOUT NURSE CROPS. Nurse crops, where there are some weeds to contend with, help to check them in spring seeded Alfalfa. A nurse crop may be harvested and the income derived will help toward the expense of starting the Alfalfa. This way the use of the land the first year is not entirely surrendered to the Alfalfa. The nurse crop should be sown lightly, rather less than half the usual amount of grain per acre. Heavy seeding will rob the Alfalfa of moisture and fertility. Don't use oats. Oats drinks too much water and shades thickly. Spring barley, spring wheat, or spring rye are suitable for nurse crops. Don't plant nurse crops with Alfalfa in the fall. When nurse crops are used in the spring sow the grain and Alfalfa separately.

10. SELECTION OF SEED OF MOST IMPORTANCE. Unfortunately, good Alfalfa seed is not sold from every country store. Indeed, poor seed has been the cause of many poor stands and failures. There has never been an excess of real good seed. Alfalfa Seed of real merit always sells high in price. Indeed, the highest priced seed in the market is usually the cheapest and safest. The loss resulting from poor seed is much greater than the difference in cost of seed. The loss comes from the labor thrown away, the time sacrificed, and the disappointing yields—not to speak of weeds introduced. Seed should be clean as possible and high in germination. It should be largely bright in color and as plump as possible. A shrunken seed may come up but will never make a real strong plant. Seed grown in the short seasons of the Northern border seems to start better and stronger and surer than that produced further South. Seed produced on irrigated lands is not equal to that produced on unirrigated lands. We have given special attention to selection of Alfalfa Seed stocks for our 1916 trade. On the following pages you will find our brands described. These were gathered personally by our representative, who went right to the sources of production and selected stocks of seed from first hands that can be relied upon.



“NORTH-WEST” ALFALFA

This brand is placed before our customers and recommended to them unconditionally. It is the cleanest, brightest, strongest seed from non-irrigated fields, grown in the states of Dakota and Montana. It is grown in the Black Hill Districts of North Dakota and in the Rocky Mountain section of Montana. Very little of this seed finds its way into the Eastern markets. It possesses a degree of vigor and hardiness not possessed by seed grown elsewhere. Only a strong vigorous strain of Alfalfa can endure the cold of the Black Hills and the North Rockies. Feeble plants cannot survive there. Consequently, the seed that is harvested there is only from strong plants of the most vigorous and hardy strains of Alfalfa.

Most of the quality of seed from this section fit for our North-West brand is eagerly purchased for reseeding right in the states where it is produced. Our stocks were procured with the greatest difficulty and at prices that forbid the possibility of selling as low as the common Alfalfas in the market. However, the price is within reach. We firmly believe that one-fourth less of our “North-West” Alfalfa seed is needed per acre than of the common brands; so that the use of this hardy strain of Alfalfa from the Black Hills and North Rockies is really a matter of economy. Stocks of the strain are limited. At this writing we are the fortunate owners of large stocks but we believe our customers will be quick to relieve us of it—even ahead of seed time. See “Latest Price List.”

“Extra” Alfalfa

This brand must not be considered a second grade. Less than one-fourth of the Alfalfa Seed produced in America is eligible for sale under this brand name “Extra.” This grade seldom finds its way into seed stores—even those that have several grades of Alfalfa. “Extra” is American grown. Some of it is produced well to the North. It comes from non-irrigated soils. “Extra” Alfalfa is clean of dangerous weed seeds. Germination is high. It is strong and vigorous and in these essentials we know of no grade of seed that excels it except our “North-West.” See “Latest Price List.”

“Safe” Alfalfa

“Safe” Alfalfa is equal to the best quality seed sold by the great majority of seed merchants. It is not equal to our “Extra” or “North-West” but matches the Alfalfas sold all over the country as 1st Grade, Prime, Fancy, and Choice. As its name indicates, it is Safe to sow, for it will germinate, and it is high in purity. See “Latest Price List.”

Imported Alfalfa

Half the Alfalfa sold in America is imported. It can usually be detected by its lack of gloss. We would greatly prefer American seed when it is to be had. Imported seed must not be derided, as there are years when the American Grown Stocks are not in sufficient supply and then imported seed is freely used. Our Imported Alfalfa is first grade. See “Latest Price List.”

“Grimm” Alfalfa

A German emigrant, by name Wendelin Grimm, came to Minnesota many years ago and brought with him from Europe some Alfalfa Seed that produced fields of more than ordinary hardiness and productiveness. Grimm's location was near Minneapolis and his Alfalfa fields withstood the rigors of winter that either froze out or thinned out his neighbors' fields. Seed produced from Grimm's fields possessed more vigor than other seed and achieved more than a local reputation. It is claimed for Grimm's Alfalfa that it has larger crowns and a more spreading root system and that Grimm Alfalfa will start better in undrained, wet locations. The reputation of Grimm Alfalfa was made before the splendid hardy and prolific strains were developed in the Black Hills and North Rockies, and at present these new Alfalfas produced in Dakota and Montana are close competitors with the Grimm strain. Of late years, climatic conditions in Minnesota were unfavorable for the production of Alfalfa Seed so that Grimm seed is very scarce and held at almost prohibitive prices.

We have secured a small parcel of Grimm we believe to be genuine that was grown in the Black Hill region. When this stock is sold we will not be able to renew for a year. If you order Grimm, tell us what to do if we are sold out. See “Latest Price List.”

Inoculate your Alfalfa Seed with “Farmogerm.” See page 32.



SOY BEANS

The profits from Soy Bean growing are greater and come quicker than from any other crop, except Alfalfa. The farmer that produces beef, pork, mutton, milk, will eventually grow Soy Beans. The quicker he begins to grow them the less he will lose by his delay in getting started. As a means of enriching run down farms quickly the Soy Bean and its close relation the Cow Pea, can not be matched. On poor lands—too poor to grow Clover or Alfalfa, Soy Beans and Cow Peas can be made to produce great quantities of feed and will increase soil fertility while doing it. Soy Beans and Cow Peas are immense gatherers of nitrogen when properly inoculated. We have not the space to bring out in full the possibilities of Soy Beans, so we give in brief form the following—

FACTS ABOUT SOY BEANS

Soy Beans have a higher protein content than oil meal, pound for pound.

You can grow 20 to 30 bushels Soy Beans per acre on poor ground.

One bushel Soy Beans contains as much digestible protein and as much digestible fat as six bushels of oats, or four bushels of corn meal, or six bushels corn and cob meal.

Ground Soy Beans are greedily eaten by all stock, are easily digested, have a tonic effect whether fed by itself or mixed with other feed.

Soy Bean hay cut before beans have ripened is greater in value of protein and fats than Alfalfa hay.

Soy Bean straw and hulls, from which the ripe beans have been threshed, is equal in value of protein and fat content to Clover hay. Fed to cows will cause an increase flow of milk.

Soy Beans will make two to four tons of hay per acre.

Soy Beans cut green and packed with corn for silage—1 part Soys to 3 parts Corn, will make a perfect ration of much more value than corn silage alone.

A handful Soys fed to horses each meal will keep hair and hide in perfect condition.

Colts, sheep, and stock can be wintered on Soy Bean hay alone.

The unthreshed vines fed to hens will bring about early and sustained winter egg production.

Corn and Soys grown together can be hogged down with convenience and profit.

An acre of Soys will produce as much meat as two acres of corn.

Soys can be grown on land too poor and too acid to produce Clover.

Soys are a legume and gather nitrogen from the air. Your soil will improve while producing crops of valuable feed. There is nothing better to plow under for rapid soil enrichment.

Planted in corn, Soys will aid the corn crop rather than curtail it. The nitrogen gathered by the Soys becomes available to the corn.

Wheat following Soys yields 20 to 50% better than when it follows oats.

How to Grow Soy Beans

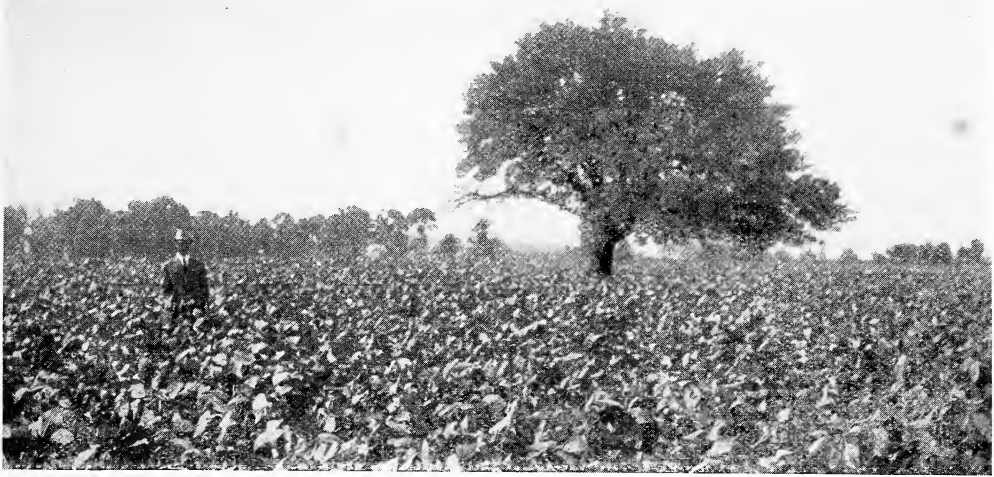
Growing Soys needs more attention than growing the old standard crops but are not nearly as difficult to grow as Alfalfa. The farmer that is a bit progressive need not fear failure.

1. PREPARE YOUR SOIL WELL—just as you should for corn. Try to kill the weeds—especially if you are going to broadcast instead of plant in rows. Frequent cultivation in advance of planting season will accomplish weed killing.

2. DON'T PLANT TOO EARLY. The soil must be warm. A week or ten days after ideal conditions for corn is usually the safe time. Soys will rot in cold, wet soil, but will grow quickly in a warm seed bed. Planting Soys is permissible until early July, other conditions being favorable.

3. DON'T PLANT DEEP. 1½ inches is nearer right than any other depth. One inch may do and two inches does not mean failure.

4. INOCULATION. To get the full benefit from growing Soy Beans you must inoculate the seed. The gathering of nitrogen from the air by the roots will not take place unless you supply the germ to start the action. Soil from another Soy Bean field may be used. It is, however, most certain and more economical to use commercial inoculation for the purpose. We believe "Farmogerm" to be the best inoculation in the market and we highly recommend it. See, Page 32. "Farmogerm" is applied right to the seed before it is planted. It takes only a few minutes and the process is simple. The nitrogen gathered from the air and deposited in the soil in excess of the plant's requirements is worth every bit of expense connected with growing Soy Beans, so that the top growth of hay and beans is clear profit.



Elmer S. Johnson in His Field of Medium Greens

5. PLANT EITHER IN ROWS OR BROADCAST. If you broadcast by hand and work in with a harrow, $1\frac{1}{2}$ bushels are required. If drilled in with a drill with all holes open, $1\frac{1}{4}$ bushels are sufficient. You must be sure to kill weeds ahead of planting time if you broadcast. As a rule, planting in rows is preferable, whether you want to grow the beans or produce hay, green fodder, silage, or if you want to turn under for soil improvement. Planting in rows saves seed and permits cultivation. You will have to cultivate as often as you do corn. Plantings are made with rows 20 to 36 inches apart and two to three inches apart on the row. Twenty to thirty pounds per acre needed by this method, depending upon exact width of rows apart and upon size of variety of Soy. The most successful Soy men we know grow in rows as close as twenty inches apart. You must plan your method of cultivation in connection with width of rows.

6. HOW TO PLANT THEM. Nearly every corn planter can be adapted to plant Soys by getting a special disc. Grain drills, however, are used more frequently. A nine-hole or a twelve hole can easily be adapted for rapid work by plugging two out of every three holes. A nine-hole drill will plant three rows at a time. A twelve-hole drill will plant four rows at a time.

7. HARVESTING. To make good Soy Bean hay—cut when half the pods are full grown and when top leaves begin to turn yellow. Cut them when there is no dew. Let lie in swaths until leaves are wilted but not brittle. Rake early in windrows but then let them thoroughly cure for several days. Then put them in small cocks and allow several more days. Prevent loss of leaves as far as possible.

8. FOR BEANS—let stand until half of the pods are dry and most of the leaves have fallen off. Same may then be handled as advised above for hay. The old self rake is used by some for cutting. It gathers the stalks in convenient open bunches and permits gathering with but a slight loss from shattering. Haul to the barn or stack.

9. THRESHING. This may be done by flail or by grain threshers. If the Soy Beans are for seed, care must be taken not to crack or split them. The removal of the concaves in the grain threshers is necessary.

USES OF SOYS are fully though briefly mentioned under heading
"FACTS ABOUT SOY BEANS."

Soy Bean Seed—Our Stocks

The Soy Beans we offer for seed include the very best varieties—grown, in most cases by the successful and scientific growers in the country. With the exception of the Mammoth Yellow, which will not mature seed in the North, all our stocks are grown here in the North, which is very important. Our list is not long. It is long enough to include every type of Soy Bean and every suitable variety for every purpose. We don't list a lot of new sorts. Really, most of the new sorts offered are nothing but the old kinds renamed. Our old sorts have been in the hands of growers who have greatly improved them, as you will further note in our description of varieties. Our "Ito Sans," "Medium Greens," and "Sables," were grown in one of the most Northern Counties of Ohio by the Johnson Brothers, who conduct the largest Soy Bean farms in the United States. Soy Bean Seed from this far Northern location is earlier and hardier than that produced in more Southern locations. These Johnson Brothers, two of them, are practical farmers as well as scientific. They grew up right on the farm, leaving same only long enough to pursue and complete agricultural courses in our most advanced universities. The Johnson Brothers have greatly improved the old varieties without attaching to them new names and trying to sell them at fabulous prices.



VARIETIES OF SOY BEANS

Wilsons. For a strictly hay bean the Wilsons are the most popular on account of the wonderful growth and slender stems and branches. On poor ground Wilsons will grow four feet tall and on fertile ground they attain a height of six feet. We think Wilsons will make a little more hay and a little better hay than any other Soy. If the object is to grow beans there are other varieties to be preferred. However, "Wilsons" will produce beans. Wilsons are early enough to mature seed in Pennsylvania, Ohio, New Jersey, and states to the South. The "Wilson" will do well on poor soils. We would give it good soils to produce forage—poor soils to produce beans. The "Wilson" is a little, jet black bean, appearing more like a bean and less like a pea than other Soy varieties. For hay, forage, soiling, silage, or green manuring, we recommend the "Wilson."

Ito San. This is a yellow seeded variety. The old "Ito Sans" were not tall enough for hay, though the hay made from "Ito Sans" was fine as to quality. The Johnson Brothers' "Ito Sans" have been improved as to growth and habit. "Ito Sans" as offered by us grows taller, and the habit of the old "Ito Sans" to cling close to the ground has been largely overcome by years of seed selection on the Johnson Brothers Farms. "Ito Sans" are early. The beans will mature in the high altitudes of Pennsylvania and in the states of New York and Michigan. "Ito Sans" yield heavily of beans and we recommend it highly for bean production. The straw after beans have been threshed out has fine stems and is equal to Clover hay in value. A great Soy to farm for beans here in the North but not the best when hay production is the first object. See Price List.

Medium Green is the great double purpose Soy Bean for the North. If planted early, beans will mature even in Northern Pennsylvania and Ohio and New Jersey. Our "Medium Greens" have been greatly improved by the Johnson Brothers, who grow them successfully in Northern Ohio. (Note importance of securing Medium Green Seed from this Northern section). The old "Medium Green" shattered badly. This has been largely overcome by the Johnson Brothers as the result of years of careful selection. The improved "Medium Green" as offered here has also been improved as to height and now grows as tall as four feet eight inches. If you want a double purpose Soy, one suitable for fine hay, silage, soiling, green manuring, as well as bean production, grow the improved green seed variety "Medium Green." See Price List.

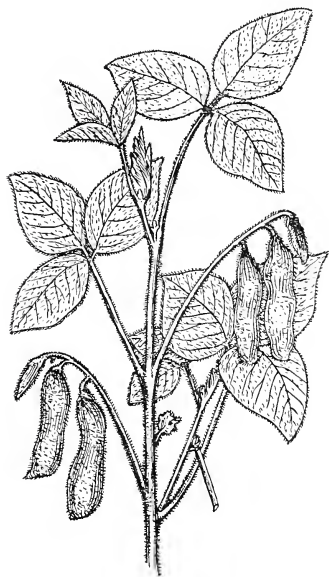
Medium Browns, known also as Ohio No. 9035. This is also a double purpose sort, though it is more prolific in bean production. These are grown here in Lancaster County, Pa. Two years in succession they have yielded 30 to 33 bushels per acre of beans.

This brown seeded sort is suitable for hay production, as well as bean production. Compared with Medium Greens, Medium Browns produce slightly more beans and slightly less forage. If you want a double purpose Soy, decide between the Medium Brown and the Medium Green. Take Medium Brown if bean production is of first importance, Medium Green if the production of forage is of first importance. See Price List.

Early Brown. This is an early sort, suitable for late planting. It is a double purpose sort, producing fine top growth and an abundance of beans. Will do well as a catch crop. Can mature beans quite to the North when allowed full season there. If planted early in Pennsylvania or Ohio or New Jersey it can be removed in time to grow wheat. Its habit is correct. See Price List.

Early Sable. A jet black Soy, very early. The "Sable" keeps its pods off the ground. It is valuable for hay or beans, yielding heavily of both. See Price List.

Mammoth Yellow will not mature beans in Pennsylvania or Ohio. Has very coarse stems. Popular in the South. Is sometimes planted in corn. In the North we prefer our other sorts. See Price List.



Soy Beans



Field of Cow Peas

COW PEAS

The Cow Pea is a valuable legume and very much like the Soy Bean in its relation to agriculture. The actual Cow Pea is not quite as valuable a feed as the Soy Bean, but Cow Pea hay is equal to Soy Bean hay in value of fats and protein. Both Cow Peas and Soy Beans are great gatherers of nitrogen when properly inoculated and therefore great soil improvers. Even when all the growth of Cow Peas above ground is removed, the soil that yielded the crop is richer than before the Cow Peas were grown. Except as herein noted, all the statements on previous pages under head of **“Facts About Soy Beans”** are equally applicable to Cow Peas. Cow Peas can be grown on poorer ground even than Soy Beans. Cow Peas as a class are more recumbent than Soy Beans, and therefore more difficult to harvest. However, we offer varieties that have upright tendencies. For pasturing or hogging or for turning under for soil improvement the trailing habit is no objection.

Instructions for Growing Cow Peas

As a whole, the same methods are employed for Cow Peas as for Soy Beans (See instructions on previous pages). Prepare the soil well. Don't plant until the soil is warm and not too wet. Plant $1\frac{1}{2}$ inches deep. Inoculate the seed with “Farmogerm” so that the little pear-shaped nodules on the roots of the Cow Pea will form and work day and night to their capacity gathering nitrogen from the air. The methods we advise for planting, harvesting and threshing Soy Beans, with slight modifications, may be used for Cow Peas.



VARIETIES OF COW PEAS



Cow Peas

New Era. This is an early sort. In the South, two crops "New Eras" are grown in one season. In the North, the "New Era" will do well as far North as New York State. For either forage or production of peas the "New Era" is very suitable as it yields richly in vines and peas. It is more erect in its habit than the average Cow Pea and can be harvested quite easily. We have genuine "New Era" stock. See Price List.

Whippoorwills. This is the standard for general purposes and the best known. It grows vigorously, matures early, is fairly erect, yields well for both hay and grain. See Price List.

The Gray Crowder, also called Gray Whippoorwill, has become a recent great favorite among growers. It is a speckled variety like the old Whippoorwill. The "Gray Crowder" yields more hay, more beans, and has a greater root growth. It is therefore a great general purpose Cow Pea, producing heavily of both hay and grain and leading as a soil renovator. We have fine "Gray Crowders." See Price List.

Groits. This variety is one of the newer ones and has back of it the approval of State and National Agricultural Bureaus, who recommend it for the quality and quantity of hay or forage, as well as a producer of grain. Investigation by us has established the fact that the "Groit" is in favor with experienced practical growers who admit that "Groit" has advantages without any objections. "Groits" are early. See Price List.

Blacks. These are a little later than the above varieties. Yield heavily of vines but produce less grain. Has the trailing habit. One of the best to plant in corn for pasture or turning under. See Price List.

Cow Peas require 30 pounds per acre planted in rows, and $1\frac{1}{2}$ bushels per acre broadcasted. Cow Peas are especially valuable to plant in corn fields for late pasture or turning under for soil enrichment. The Cow Pea, like the Soy Bean, deserves much more attention, agriculturally, than it has yet received.

Field Peas (Canada Peas)

Field Peas produce immense quantities of green feed or hay early in the spring and gather nitrogen at the same time. They should be planted early in the spring, quite in contrast with Soys and Cow Peas, which are warm weather plants. Field Peas may be planted alone, three bushels per acre; or with oats, $1\frac{1}{4}$ bushels peas with $1\frac{1}{4}$ bushels of oats. The oats help to support the peas. Sow in March if you can. If you can't—sow as early as possible in April. When you put out peas and oats, sow separately. Drill the peas in three to four inches. Then sow the oats $1\frac{1}{2}$ to 2 inches deep. This will make a great growth quickly. This can be mowed and fed green to stock. Hay can be made or same can be pastured. Either as hay or green feed, Canada Peas alone or mixed with oats will be greatly relished by stock. The peas are a legume and therefore gather nitrogen. Soil improvement from growing Canada Peas will be greatly enhanced if seed is inoculated with "Farmgerm."—See page 32. See Price List.



Spring and Summer Grains

Marquis Spring Wheat (beardless). We have been discouraging the growing of Spring Wheat, except in the higher portions of Pennsylvania and in the states to the North. We believe the "Marquis" variety will do further South. At least, we know this variety to have succeeded where other sorts of Spring Wheat have failed. "Marquis" wheat has done well for years in the winter wheat sections of Iowa and Kansas. One reason "Marquis" does better than other spring varieties is that it is earlier by ten days than the others and not nearly as subject to rust and disease. "Marquis" makes a beautiful grain and is productive. Our "Marquis" seed comes from North Dakota, which means our seed, besides being pure and clean, has all the inherited tendencies of the Northwest—earliness—hardiness—productiveness. See Price List.

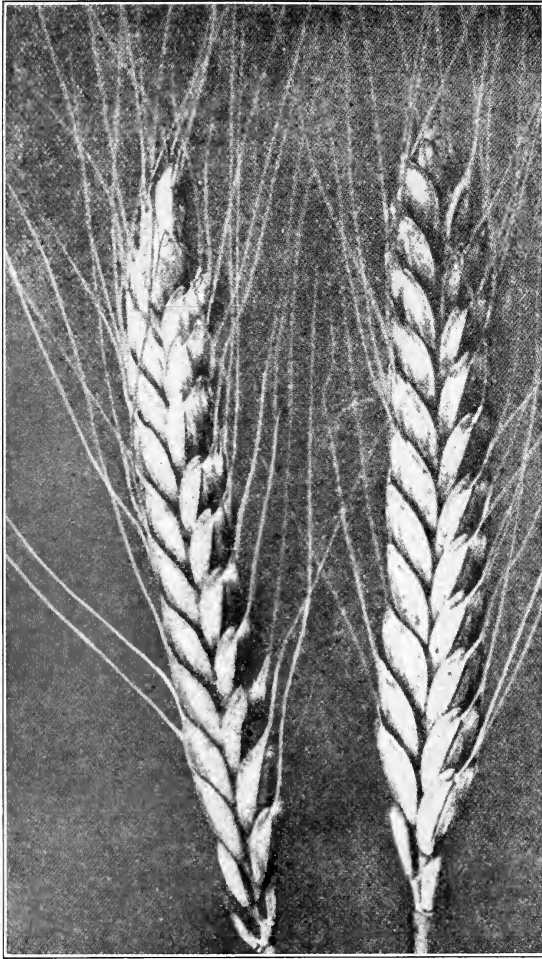
Manschury Barley. Barley will do well anywhere from the Canadian border to the states far South. In the Eastern and more Southern States it will deteriorate unless seed is brought from the North. It will do well on land too poor for other grain crops. Two bushels should be seeded per acre. It will yield double as much as wheat and the grain is valuable for all kinds of stock. It should be sown early as oats, if possible, for best results, but barley will stand late planting much better than oats. We have secured North Dakota grown barley for our trade of the "Manschury" variety. This is a bearded variety that leads other varieties in feeding values and yielding qualities. It is early, does not lodge. Try a few acres of "Manschury" Barley. See Price List.

Beardless Spring Barley yields well though not quite equal to the bearded sorts. Beardless Barley Seed should be brought from the far North to get best results. Beardless Barley is, of course, free from the objectionable beards that are so troublesome in harvesting and threshing. Beardless Barley is much safer to feed in the straw to live stock than Bearded Barley which must be threshed. It is a fine grain to mix with other seeds for soiling or hay and is also a fine grain to use as a nurse crop for Alfalfa, etc. Our stock was selected by our buyer from a grower in North Dakota who grows Beardless Barley exclusively. We believe it to be true to name and strictly pure and genuine Beardless Spring Barley. The grain from the beardless sort is just as valuable as that from the bearded strains and is relished by cattle, hogs and poultry. See Price List.

Spring Rye. This valuable rye is used to produce grain and is also used to sow with other grains for spring pastures and soiling purposes, as well as for nurse crops. Spring Rye should be seeded early, same as oats, and will make fine crops. Seed should be brought from the North every few years, as seed produced here deteriorates from time to time. Spring Rye is not quite as plump in the grain as the winter sort but is just as valuable for all purposes. Our stock was secured directly from the grower in North Dakota, and is pure, clean, and true to name. See Price List.



"Marquis"
Spring Wheat



Heads of Speltz

Speltz, or Emmer, is one of the newer valuable grains that will do well all over the East, under circumstances that should make it valuable. Please note the following

Facts About Speltz

It resists drought.

It thrives on poor land, stony ground, in forests.

It makes a crop with almost any condition of soil or climate.

Endures a great deal of frost.

Is not readily damaged by harvest rains.

Does not yield to rust or smut.

Yields more than oats, rye, wheat, or barley.

Makes better feed than barley.

Stock readily eat both grain and straw.

Ripens very early.

Speltz is rightfully becoming popular and is now grown in a wholesale way in many sections. Eventually, Speltz will supplant some of the other cereals of the world. It is good feed for milch cows and hogs. It should be mixed with bran as it is very concentrated. Sow two bushels per acre early in the spring, same as oats. If you have use for grain feed, don't let another season pass without trying Speltz. Our Speltz Seed is from the Northwest—pure, clean, with the usual "Northwest" strength and vitality. See Price List.

Japanese Buckwheat. Seed is brown to black, larger than Silver Hull. Blooms long and ripens early. It resists drouth and blight. Yields heavily, a profitable variety. See Price List.

Silver Hull Buckwheat. Enjoys with the Japanese variety a world wide reputation. The grain is of a beautiful light gray and has a thin husk. Millers like Silver Hull as it makes white flour and leaves little waste. A favorite variety for bees. See Price List.

ANNUAL HOG PASTURE

This is a mixture of spring grains, grasses, vetches, field peas, etc., fourteen different sorts, mixed together to be sown in the spring for rapid and rank growth of pasture suitable for hogs. We have not advertised this mixture heretofore but have made it in large lots for hog raisers and have seen its benefits. This Annual Hog Pasture Mixture will positively and profitably fatten hogs without any other grain. It is also fine pasture for other cattle of all kinds. Most of the plants in the mixture grow again after being pastured off. Sow 100 pounds per acre, about two inches deep. Try a few acres to begin with. When grain is high in price, "Annual Hog Pasture" can be used for live stock with great economy. See Price List.



SORGHUM

Sorghum is of the Sugar Cane family. It is grown largely for sugar, but two varieties, "Early Amber" and "Early Orange" listed by us are equally valuable for forage and may be grown anywhere in the United States. It is like corn in appearance. It may be cut two or three times in a season. It is excellent food, either dry or green, for cattle and livestock of all kinds. It stands drouth well and is a rapid grower. Has high feeding value. Plant in well prepared soils. Don't plant until soil is warm. If you broadcast by hand, two bushels per acre is required on account of imperfect covering that follows. If drilled in, $1\frac{1}{2}$ bushels per acre is sufficient. Plant one to two inches deep. Planting in rows like corn is best if you intend to cultivate several times. The seed should be one inch apart on the row and the rows just far enough apart to permit cultivation. By this last method, 10 to 20 pounds per acre is needed. Feed value of Sorghum is greatest if cut just before head appears. The younger it is cut the quicker will be the growth of the following crop.

"Early Amber" is earliest and most popular for forage.

"Early Orange," ten days later, makes a slightly heavier yield of both fodder and seed. See Price List.

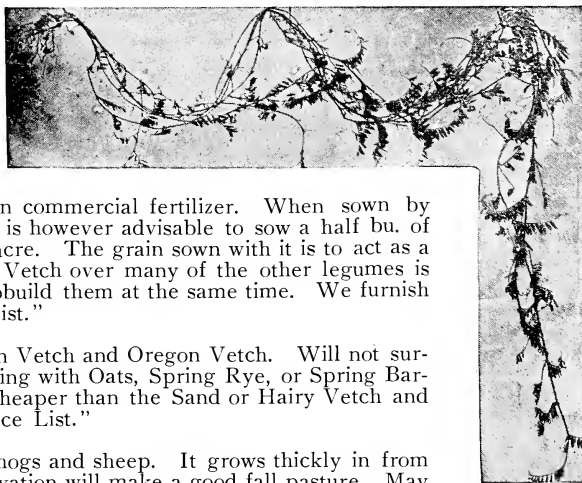
Kaffir Corn. This plant is similar to Sorghum. It grows taller, makes fine fodder or green feed for soiling, but does not stand more than one cutting. It is most valuable for seed and produces 30 to 60 bushels per acre. For fodder and soiling crop, farm like Sorghum (See Sorghum). For seed production, sow 5 to 10 pounds per acre in rows like corn. See Price List.

Feterita is a wonderful new grain resembling "Sorghum." The agricultural department brought it from Africa. It is early, resists drought, yields heavily of seed or forage. It branches right from the roots and makes as many as three to eighteen heads from a stool. Plant in rows similar to Kaffir Corn. See Price List.

Sudan Grass. Comes from the African Sudan Country. It belongs to the Sorghum family. It is more like a grass than a corn. May be cut often for hay. It laughs at drought and will grow vigorously without any rain if once started. May be broadcasted, 16 pounds per acre, or planted in rows, three pounds per acre if three feet apart. Four to six pounds if rows are 18 to 24 inches apart. The rows should be as far apart as the tools available for cultivation will permit. See Price List.

Sand or Hairy Vetch.

This is one of the most valuable friends of the farmer. It is valuable alike and at the same time for hay, pasture and for soil improvement. May be sown in the spring or fall. It is an annual but it drops its seed freely and will renew itself and last for years. Various Experiment Stations have claimed that the value of an acre of **Sand or Hairy Vetch** to the soil is from \$16 to \$48 in commercial fertilizer. When sown by itself 60 lbs. of seed may be sown per acre. It is however advisable to sow a half bu. of Wheat or Rye with about 50 lbs. of Vetch per acre. The grain sown with it is to act as a support to the Vetch. The advantages of this Vetch over many of the other legumes is that it will thrive in the most barren soils and upbuild them at the same time. We furnish high grade seed. Prices—See "Latest Price List."



Spring Vetch. Known also as Common Vetch and Oregon Vetch. Will not survive our Northern winters. Is sown in early spring with Oats, Spring Rye, or Spring Barley and Canada Peas. Spring Vetch is much cheaper than the Sand or Hairy Vetch and must be sown a little heavier. See "Latest Price List."

Dwarf Essex Rape. Fine for cattle, hogs and sheep. It grows thickly in from six to eight weeks. Sown into corn the last cultivation will make a good fall pasture. May be sown spring, summer or fall. When plowed under, the soil is greatly benefited. Rape will do well in any kind of soil and thrive under almost any conditions. It can be grown at such a small cost per acre that it should be more largely grown.

Sow 5 lbs per acre. Prices—See "Latest Price List."

Cow Horn Turnips are grown for soil improvement along with Crimson Clover and alone in corn fields. Turnips are not legumes but the Cow Horn variety reaches down into the sub-soil and brings up considerable fertilizer ingredients and adds them to the top soil. Besides this, the turnip improves its mechanical condition and adds considerable humus. The tops are eagerly eaten by sheep and poultry. The cost of growing is slight on account of ease of seeding and small amount of seed required. Three pounds will seed an acre. See Price List.

Onion Sets. See "Latest Price List."

Plant of
Hairy
Vetch

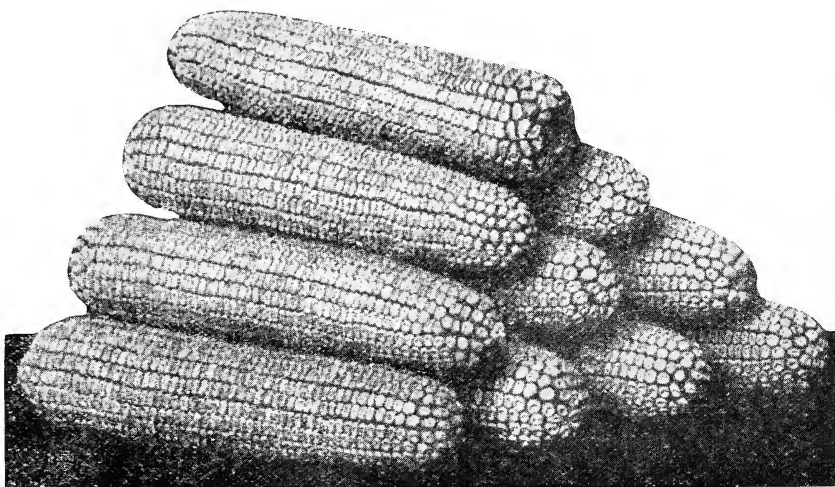


SEED CORN

In this department we have the usual qualities but not the usual quantities. As many of our readers doubtless know, the corn crop in this section was leveled to the ground last year before maturity. This greatly reduced the yield of select ears. We do not sell corn grown in different latitudes than our own, therefore, we can not look elsewhere for seed for this department. Customers depending upon us for Seed Corn would do well to order without delay as our limited stocks will not last through the season. Indeed, we have already sold all the corn we will have to offer on the ear of all varieties except Long's Champion and White Cap Yellow Dent. We have, however, as we go to press, fine stocks of shelled Seed Corn of the varieties we list. Tips and butts are carefully removed and seed will work well through drop edge planters. Our stocks are true to name from carefully selected ears. Great care has been taken in drying. Last fall was an exceptional season for natural drying and full advantage was taken in our drying rooms. We use the celebrated Martin racks to dry and store seed corn. Our storage rooms are equipped so that when freezing weather occurs our seed stock can be protected by artificial heat. All our Seed Corn is strong in germination.

VARIETIES

Reid's Yellow Dent. This is a first rate, all round, practical variety of corn. Ears are medium in length. Grains are narrow and deep. Rows run regular from end to end. Reid's has a marked tendency to fill out well at both tip and butt. The cob is red and very thin. Few corns show such a big proportion of grain to cob as Reid's Yellow Dent. Reid's is early. Not early enough for the Northern exposed slopes of the Pennsylvania mountain sections but will mature nicely anywhere else in Pennsylvania, Ohio, New Jersey, Delaware, Maryland, Virginia and West Virginia. Suitable for land that is only moderately fertile, as well as for rich soils.

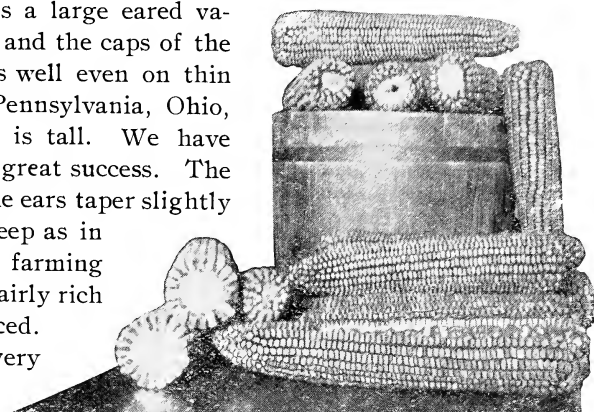


The strongest point in favor of "Reid's Yellow Dent" is its tendency to produce a fine ear on every stalk. This is an important test of any variety. No corn will yield heavily per acre unless each stalk can be depended upon to yield a creditable ear. Reid's is a strictly yellow corn both shelled and on the ear.

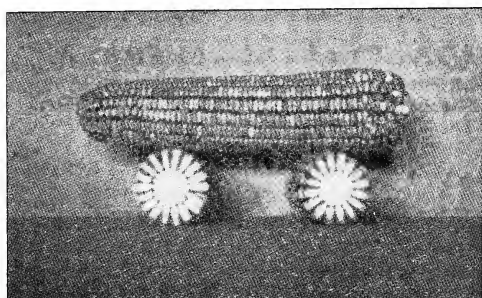
The fodder of Reid's is medium to fairly tall. It is leafy. This is desirable in case of prolonged drought. Reid's has been grown on "Hoffman Homestead Farm" a number of years with great success. Nearly all of this year's offering of Reid's was produced by us. If your land is of the average kind—neither extremely rich nor extremely poor—and your season of average length you need not hesitate to plant Reid's Yellow Dent. See Price List.



White Cap Yellow Dent. This is a large eared variety. The sides of the grains are yellow and the caps of the grains are white. This type of corn yields well even on thin land. It matures in Southern half of Pennsylvania, Ohio, New Jersey and further South. Fodder is tall. We have many customers growing White Cap with great success. The grains are square, rather than pointed. The ears taper slightly and toward the tip of the ear are not so deep as in the center. This variety will stand rough farming and even neglect better than others. On fairly rich soils long and heavy ears will be produced. White Cap Yellow Dent is rightfully a very popular and productive variety of corn. See Price List.



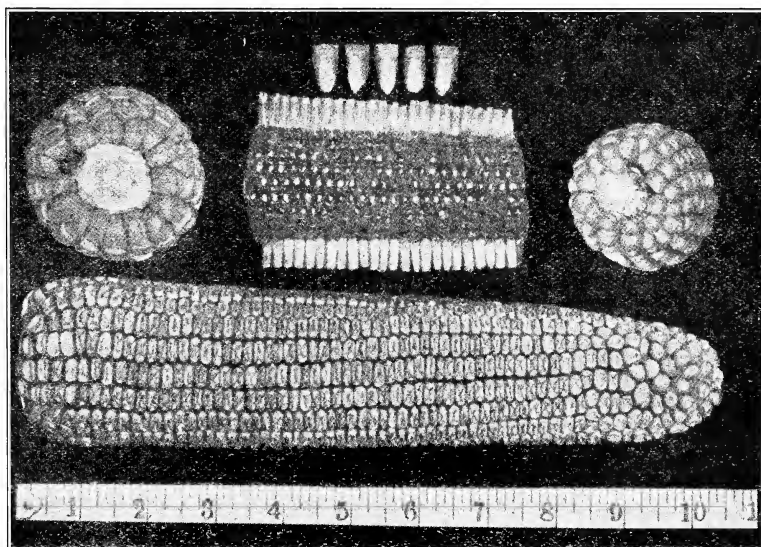
Golden Yellow Dent. This is another very rich colored yellow corn. The ears are a trifle thicker and a trifle shorter than Reid's Yellow Dent. The grains are deep, somewhat pointed. The red cob is small. Golden Yellow Dent shells well. Seventy-two pounds of ears frequently yield sixty-four pounds of grain. A good reliable yielder. Yields heavily and reliably. Fodder is medium to tall and leafy. Our Golden Yellow Dent is grown on a farm adjoining our own by a very careful farmer. See Price List.



Cloud's Early Dent. This is a popular variety in Southeastern Pennsylvania. Ears are of medium length and thick, cobs small, and grains very long. The grain is straw colored yellow. The caps of the grains are lighter than the sides but both caps and sides are different shades of yellow. There are many rows of grain--the best ears having as many as 26 to 28 rows. While ears are thick, there is little cob. Cloud's matures easily in Southern Pennsylvania and is regarded as early. Cloud's is a heavy yielder and reliable in every respect. See Price List.

Improved Early Leaming

This is the genuine, original Early Leaming corn that was originated by J. S. Leaming, now deceased, in Ohio many years ago. It is not large in the ear. The grains are deep. Stalks are short. The ears grow low down on the stalk. Matures very early, ripening next to the Flint Corns. The color is a rich yellow. Ears taper somewhat with a tendency to come to a point at the tip. This characteristic offends the corn





experts but the variety will please all who seek an extremely early corn that will yield well in sections where the season is necessarily short. This variety should do well even North of Pennsylvania and if planted in time will mature even in the higher altitudes. Where the season for growing corn is long or of even moderate length, we would prefer some of the other varieties we offer. Improved Leaming has a place where the season is short that cannot be filled by other dented varieties. See Price List.

Lancaster County Golden Sure Crop. This variety is of a type different from any other in this list. It is yellow in appearance on the ear but the sides of the grains are red, which gives the corn a red or speckled appearance when shelled. Corns that shell red are good yielders for rough and ready farming. The fodder is tall and very leafy. This variety is one of those that will not conform very well to the standards set up in the shows. The ears are very long but not proportionately thick. There are only fourteen to twenty rows of grain and the rows are inclined to be curved rather than straight. The grains fill out well, both the butt and tip. They are not very deep but nearly square, with the rows set so closely together that there is no waste space between them. There is not much cob, so that the proportion of shelled corn to ear is very satisfactory.

The value of this variety is in its ability to produce a very good ear on every stalk in the field. We recommend it to growers in particular who have been disappointed in their trial of various sorts of corn in soils that are only of average strength and under conditions where the best of culture could not be given.

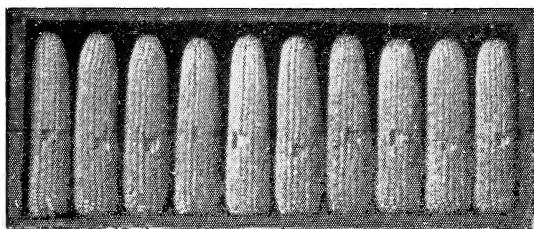
Lancaster County Sure Crop is fairly early and will mature in sections where other large eared varieties will have no chance at all. It husks very easily and is one of the best all round corns for rough and ready farming in this list. Some of our customers use Sure Crop for ensilage corn with very satisfactory results. See Price List.



Here are a Few Reports from Customers

We have never sold any seed that has drawn from our customers so many fine reports as Lancaster County Sure Crop. A Mr. O'Donnell of Butler Co., Pa., writes: "The corn I got from you last year made 114 bu. per acre." A Mr. Casper of Union Co., Pa., writes: "I secured 142 bu. per acre on five acres." A customer from Philadelphia whose farm is in Montgomery Co., Pa., stated that he sent four ears of Lancaster County Sure Crop to Mr. Atlee Burpee, the seedsman, who replied that, "They are the best four ears of corn I have ever seen; and if it is really Sure Crop, it is certainly most magnificent."

Johnson County White. This pure white corn is the only variety of its class that we offer. Johnson County White is almost perfect in its formation and wins more prizes in the big shows than any other corn. Besides being almost perfect in formation it is a large eared variety with very deep grains. The ears are cylindrical in shape and do not taper except near the tip. The fact that Johnson County White Corn has taken the Grand Champion Prize in four successive National Corn Shows is the best evidence of its uniformity of type and perfection of form and shape.

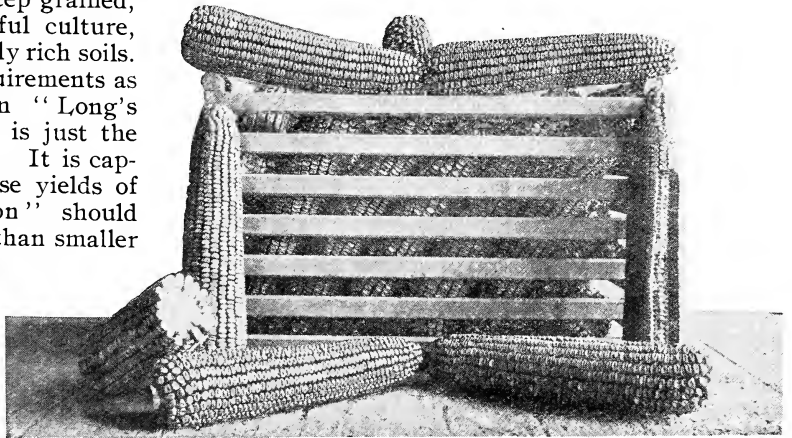


This variety needs a comparatively long season. Don't plant it in Northern Pennsylvania, Northern New Jersey, or other sections of same latitude. It will mature in all the Southern Counties of Pennsylvania as well as Southern half of Ohio, New Jersey, Indiana and states to the South. In this section it may be planted in soils of moderate fertility. Johnson County White will produce larger crops



of corn than the large yellow eared varieties under same conditions. There is a mistaken belief that White Corns or even White Cap Corns do not possess nearly the same feeding value as yellow corns. There can only be the slightest difference in feeding value, not more than 1% at most, and this should not deter any one from giving trial to Johnson County White who has soil that is moderate to rich and a climate that will permit early planting and late harvesting. Nearly all corns that have so large an ear as Johnson County White do not have a deep grain. In this respect, Johnson County White is an exception. A large ear of this variety is almost a solid mass of corn of great weight and beauty. It is worthy of any farmer's attention. See Price List.

Long's Champion Yellow Dent. This variety will commend itself to those in search of large eared, yellow, deep grained, varieties. In considering such varieties, remember that all long eared, deep grained, yellow sorts require careful culture, long seasons and moderately rich soils. If you can meet these requirements as to soil and season, then "Long's Champion Yellow Dent" is just the variety you should select. It is capable of producing immense yields of corn. "Long's Champion" should be planted further apart than smaller eared sorts. It should receive careful cultivation throughout the season. Our experience is that Long's Champion is one of the most profitable varieties on our list, making extraordinary yields when farmed by good farmers on good land. Ears of twelve inches or more in length are not at all unusual for our "Long's Champion." The ears are thick, as well as long. The rich, yellow grains are deep and a good ear is truly a mass of corn. Prices--See List.



Red Cob Ensilage. This is the only straight ensilage corn we offer. It is one of the tall sorts, making a great deal of leafy fodder. It is planted from the North to the South. In more Northern sections seed can not be matured. The grain is white and the cob red. It is a very popular and valuable ensilage corn. Our stocks are high in germination and will please. See Price List.

Longfellow Yellow Dent. This is an eight-rowed variety, making ears ten to fifteen inches in length that can be grown where seasons are too short for the early dent varieties. It is productive, yielding two ears to a stalk. Can be planted as late as July 1st and mature a fine crop. Sold shelled only.

See Price List.

White Eight-Rowed Flint. This variety is similar to the above sort except as to color. Sold shelled only. See Price List.

Sweet Corn—Stowell's Evergreen and Country Gentlemen. See Price List.

Shall We Substitute? In ordering Seed Corn late, advise us of your second or third choice or state whether we shall return money if sold out of your choice. Remember we are already sold out of corn on the ear, except Long's Champion and White Cap Yellow Dent.

Winter Seed Wheat

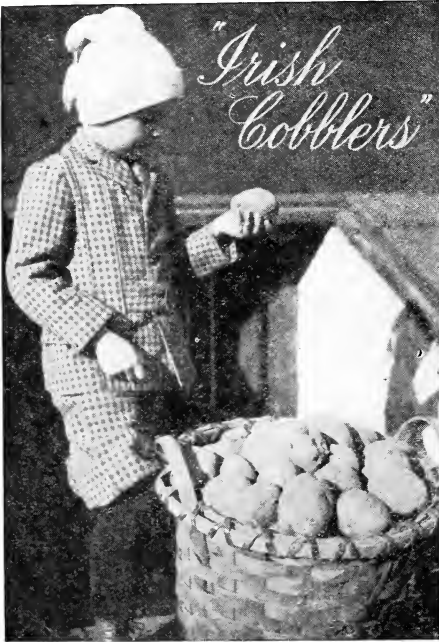
We are the largest growers and dealers in Winter Seed Wheat in the Eastern Section of the United States. Any time after July 15th of each summer you can get our offerings as to variety and price. This coming season in particular we will be prepared to furnish the finest Seed Wheat—clean—graded—of highest germination—varieties that yield more per acre than the common sorts.



SEED POTATOES—MAINE GROWN

Unless otherwise specified, all our stocks of Seed Potatoes were grown in Aroostook County, Maine. No other section has such an ideal soil or climate for Seed Potato production. The average yield of potatoes in this favored section is more than double that of

of the rest of the United States. 85% of the Seed Potatoes used South of New York and East of the Mississippi River come from Maine. We firmly believe that Maine Grown Seed Stock excels that grown in any other section. There is, however, a vast difference in Seed Stock sent out from Maine, and customers are warned against much of the stuff sold at ridiculously low prices. All are first class stock produced by the best growers, who take every precaution to obliterate blight and other diseases from their crops. The reputation of Maine Seed Potatoes for the past few years has been unjustly injured by the embargo against "powdery scab." The Government has discontinued all these embargoes after thorough investigation, that proved—first, that "powdery scab" has been eliminated from the Maine potato section; second, that "powdery scab" does not reproduce itself when infected seed is planted in the potato states South of New England. Our potatoes are all stored in Maine this season and will be brought down in heated cars the last half of March and distributed from Landisville.



We can accept orders now for shipment when weather permits. Usually, we can ship seed potatoes after March 20th, but if weather is too cold shipments will be withheld.

Prices of Seed Potatoes fluctuate wildly, so that it is impossible to print them into our catalog. We will follow the trend of the markets and quote closely at all times. All potato quotations are for immediate acceptance. If you delay ordering, write for new prices.

Order Seed Potatoes Early. Available seed stocks are scarcer than for some years. Prices may go very high near seed time. Orders for future shipment of five or more barrel sacks will be entered if one-fourth of the cost is remitted. Orders for less than five barrel sacks for future shipment must be accompanied by full payment.

Maine potatoes are sold principally by the barrel. A barrel means 165 pounds of potatoes and are shipped in strong jute sacks especially made for the purpose, one barrel of 165 pounds to the sack.

VARIETIES

Irish Cobbler. This is the earliest standard white potato. So well known that description might be omitted. It is round to oblong in shape. Eyes are



Irish Cobblers in Blossom



rather shallow for an early sort. There is an indent at stem end of potato. The cluster of eyes at seed end is apt to be on the side of the end. These characteristics of the Cobbler will enable any one to identify it. The Cobbler is one of the best yielders. Given rich soil and proper fertilizer it will make extraordinary crops. The foliage is strong—branching—dark green. The eating qualities of the Cobbler cannot be excelled. It is quite mealy—not only when dug early, but when kept through the following winter. The Cobbler stores safely. Though it is an early sort, its eyes remain dormant as long as the later varieties under same conditions. The keeping qualities of the Cobbler has made this variety a suitable one for commercial planting. Summing up—the Cobbler is very early—cooks well—is mealy—beautiful in shape and color—stores safely—yields enormously. See Price List.

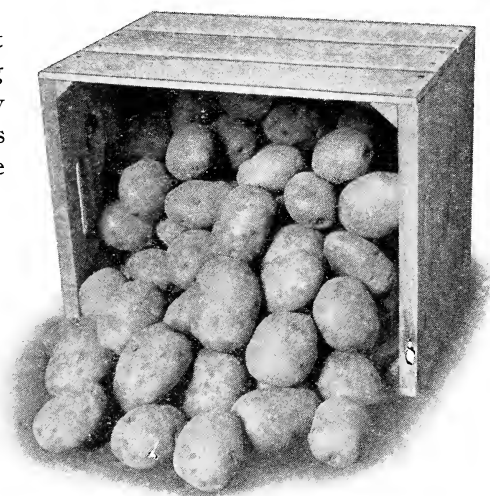
Sir Walter Raleigh and Carmen No. 3. These are two valuable standard sorts, very similar in manner of growth. Both blossom purple—grow round to oblong in shape—fine in eating qualities—heavy yielders—ripen in mid-season. Our stocks were selected from the best growers of these varieties in Aroostook County.

See Latest Price List.

Green Mountains. This is probably the best known standard sort grown. It is of highest eating qualities—round to oblong—white flesh—healthy grower—heavy foliage—good keeper, retaining its good eating qualities all through winter. We have some fine stocks.

See Price List.

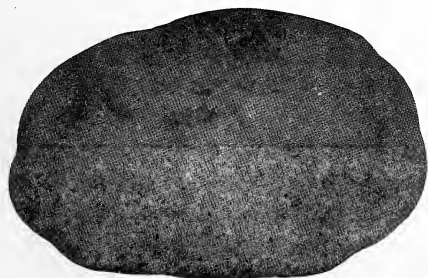
New Snows. This is a new sort, bred from the old Green Mountain. It ripens in mid-season—is round to oblong—shallow eyes—fine cooking variety. The “New Snow” was bred for heavy yield, and as a general purpose potato will outyield other sorts of same type. “New Snows” have all the good points of the old Green Mountain, with extra yielding possibilities. See Price List.



New Snows

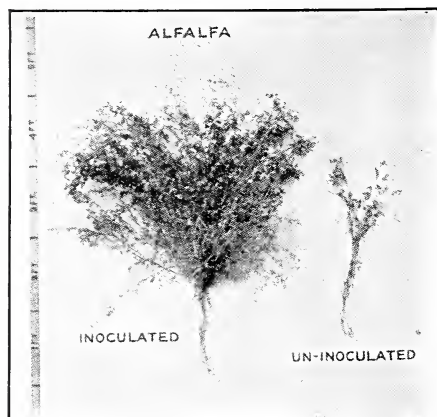
State of Maine. Another standard sort, well and favorably known—oblong in shape—large in size—prolific yielder—too well known to require lengthy description. See Price List.

Early Rose. One of the oldest sorts that holds its popularity for earliness, yield, and eating qualities. Our “Early Rose” are genuine and true to name. The pink coloring in flesh show plainly in our stocks. Selected by ourselves from careful Maine grower. See Price List.



Early Ohio

Early Ohio. This favorite early sort cannot be omitted from any good list. It is distinct in type, quite unlike any other sort—slightly pink in color—very early ripener—heavy producer. It is widely and favorably known as an early garden sort of much merit. We offer fine stocks, pure and true to name. See Price List.



"Farmogerm" is the highest grade—most effective—most successful inoculation for legume seeds of all kinds on the market. We say this after having made investigations of cheaper articles sold for the purpose. There are a number—but we fear to handle them. "Farmogerm" has an important advantage in that it may be purchased in advance of the time it is needed and kept on hand ready for use without danger or risk of spoiling. This is due to a peculiar tube that is inserted in each bottle of "Farmogerm" which admits the necessary quantity of pure air and yet keeps out destructive contamination. "Farmogerm" is a pure culture, or growth of nitrogen-fixing bacteria, that has been selected and bred up to transform large amounts of nitrogen from the air into soluble nitrates.

Unless your soil naturally contains the proper bacteria, you cannot successfully grow Alfalfa, Soja Beans, Cow Peas, Field Peas, Sweet Clover, Vetches, Crimson or other Clovers without inoculating your seed. The best form of inoculation is "Farmogerm." Its careful use will insure success of all legume crops if all the other ordinary precautions have been taken.

"Farmogerm" will increase the yield, quality, and give quicker growth and earlier maturity. It will increase the food value of legumes, make them grow in new localities, where they can not otherwise be grown. "Farmogerm" will enrich the soil for future crops by assisting the plant to gather at its roots large deposits of nitrogen thereby increasing the fertility and value of the soil. "Farmogerm" means better crops—better soil—less fertilizer—less labor.

"Farmogerm" is endorsed by farmers, Federal Agricultural Department, and by many State Experiment Stations.

"Farmogerm" is only useful for legume plants—by which we mean plants that gather nitrogen at the roots. The bacteria is different for each crop. When ordering, state for what you will use "Farmogerm." We recommend "Farmogerm" for Alfalfa, Alsike, Crimson Clover, Sweet Clover, Mammoth Clover, Medium Clover, White Clover, Canada Peas, Cow Peas, Garden Peas or Beans, Soy Beans and Vetches.

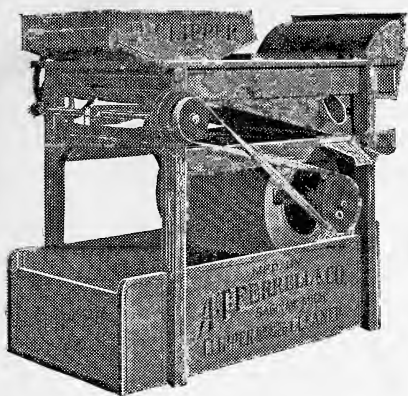
"Farmogerm" will be furnished by us, delivered to your Post Office or Express Office at the following prices:

$\frac{1}{4}$ acre size, \$.50	5 acre size, \$ 6.00
1 acre size, \$2.00	50 acre size, \$55.00
100 acre size, \$100.00	

When ordering state for what it is to be used, as the bacteria is different for different crops—is easily applied—directions for use go with every package sold.



Inoculated Alfalfa on Walker Gordon Farm, N. J.



How to Get Rid of Weeds

The reason your fields become full of weeds is because you sow them with your seeds. The way to get rid of the weeds is to clean your seed before sowing with

The "Clipper" Grain and Seed Cleaner

It will take out weed seeds, light, dead seed, etc.
Will insure a more healthy, even stand of the crop.
Means more money for you at the end of each season.

The Clipper Mills have been in constant use in our cleaning departments ever since we started business. None of the others we first tried out nearly equalled the work of the Clipper.

We offer you the No. 1-B Mill for farm use—made on same principles as those we have installed—differing only in size. Covers Floor Space of 4 ft. 8 in. x 2 ft. 2 in. Shipping weight 185 lbs.

The No. 1-B Clipper Will Do

as nearly perfect work as can be done in the cleaning of all classes of grains and seeds, peas, beans, etc. Will separate cockle from wheat, chess from wheat, oats, barley, rye; grades seed corn perfectly; also red clover, alsike clover, alfalfa, clover containing buckhorn or plantain, timothy seed, millet, sorrel or pepper grass from timothy, flax seed, mustard seed; also navy beans, soy beans, field peas, cow peas, cane seed, kaffir corn; separating corn from oats; and for cleaning and grading onion seed, radish, cabbage, rape seed, vetch, etc.

Clipper Features—Not Found on Other Cleaners

Vertical Air Blast—This is a feature that no other cleaner has. It makes possible some very difficult separations that can be made in no other way. For instance, when cleaning seed wheat, if the blast is properly regulated and the mill turned just fast enough, all the light chaffy kernels can be separated or blown out, leaving only the largest, heaviest, plumpest grain, which is the choicest kind of seed. The same is true when cleaning seed oats—the vertical blast will blow out all the light chaffy kernels and "pin oats," leaving high grade seed. Same is true when cleaning barley or rye. If you use an air blast sufficiently strong when cleaning your seed grain you can raise the weight from three to five pounds per bushel. That is, after the grain is graded on the Clipper Cleaner, it will weigh that much more per bushel than if weighed before the light chaffy kernels were blown out.

Capacity—The Clipper No. 1-B will clean seed wheat at the rate of 20 bushels per hour—clover seed at the rate of 10 bushels per hour.

Screens—Screens are in plain view, within easy access while the machine is in operation. Each machine is equipped with 12 screens, 19 inches wide, 22 $\frac{1}{4}$ inches long. The perforated zinc screens will not rust and the plated wire screens will last for years if properly cared for.

No Other Mill Cleans so Clean or Sells so Cheap.

Grain Box—Cone Pulley—See explanation with cut below.

The No. 2 Clipper Cleaner will do the same work as the No. 1-B. Although larger, it is fitted especially for cleaning all kinds of fine seeds, such as clover, timothy, alfalfa, fine grass seeds. If this size mill is to be operated by hand, we do not recommend it strongly for cleaning grain, because more power is required than on grass seeds. However, we furnish a power pulley free if you will use power in operating the No. 2. For cleaning grain on the No. 2 Mill you will need an extra set of four screens, which we can furnish at \$6.00 per set.

Clipper Mills are used and endorsed by the leading Agricultural Colleges, Experiment Stations, Seed Breeders, and Seed Houses all over this country as well as abroad.

PRICE { For the No. 1-B \$22.00 } Delivered, Freight Prepaid to any Railroad Station in
{ For the No. 2 \$32.00 } Penna.—N. Y.—N. J.—Conn.—Mass.—Maryland—
Virginia—West Virginia—Delaware—Ohio.

PRICES—\$23.00 and \$33.50 to any other station East of the Mississippi River.

Sectional View of No. 1-B and No. 2 "Clipper" Hand-Power Cleaners Showing Vertical Air Shaft, Dust Hood and Grain Box, which are Special Features of the "Clipper"

FIG. 1—SHOE, with two receiving grooves for screens. The screens are securely held in place by a compressing rod.

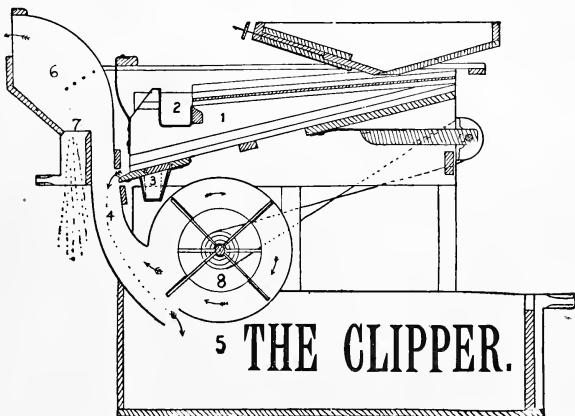
FIG. 2—STRAW-SPOUT, for carrying off large particles, straw, etc. etc.

FIG. 3—SCREENING SPOUT, for removing sand, fine seeds, etc. It is opened by pulling out slide, above spout.

FIG. 4—VERTICAL AIR SHAFT, through which the draft passes upward, carrying off chaff, dust, etc., through Dust Hood see Fig. (6). The perfect grain and seed fall and pass out at Fig. 5 into the Grain Box, which will hold 5 bushels. It has a Lifting Board at the end which allows the contents to be easily scooped into sacks. **Our Grain Box prevents waste, makes sweeping floors unnecessary, and also furnishes convenient storage for screens and all detachable parts of the machine, when not in use.**

FIG. 6—DUST HOOD through which chaff, dust and worthless matter are discharged. All light, imperfect and foreign grain and seeds are discharged at opening (see Fig. 7).

FIG. 8—FAN, with iron arms, fitted on turned steel shafting equipped with Cone Pulley. This allows changing the speed of the Fan, which is necessary to properly clean grain and seeds of varying weights.



"NORTH-WEST" BRAND CLOVER SEED

IS

EARLIER

HARDIER

MORE
PRODUCTIVE

REQUIRES
LESS SEED
PER ACRE

ECONOMICAL
TO SOW



A. H. HOFFMAN, INC.
LANDISVILLE, PA.
LANCASTER COUNTY.